

NOTES ON, AND DESCRIPTIONS OF, CHALCID WASPS IN THE  
SOUTH AUSTRALIAN MUSEUM.

Concluding Paper.<sup>(1)</sup>

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(Communicated by Arthur M. Lea, F.E.S.)

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The following data and descriptions comprise a final report upon a collection of the Hymenopterous family Chalcididae loaned to me by the Director, South Australian Museum. The types are in the named museum, cotypes in the Queensland Museum at Brisbane, but a few are otherwise disposed of, as noted in the text.

Subfamily EUPELMINAE.

Genus EUPELMUS Dalman.

1. EUPELMUS ANTIPODA Ashmead.

A female specimen, Launceston, Tasmania (F. M. Littler), December 17, 1916.

The basal  $\frac{1}{4}$  of ovipositor is aeneous, rest yellow. The species differs from *E. splendidus* in bearing a longer ovipositor (half abdomen's length) and in the different colour of this organ. The metallic colour is deep and the tibial tips in leg 3 sharply contrast. Postmarginal somewhat exceeds the stigmal. Runs to *splendidus* in my revised table of the genus *Eupelmus* (Australian).

2. EUPELMUS WORCESTERI Girault.

A female, Murray Island, Torres Straits (A. M. Lea).

Tibia 2 has the distal two-thirds red-brown. Scutellum finely long-lineolated.

3. EUPELMUS SPLENDIDUS Girault.

A female with No. 2. Differs from *E. antipoda*: Frons a bit wider, more opaque, without rows of pin-punctures (eyes, mesopleurum bare in both), ocelli in smaller triangle, shorter ovipositor, stigmal vein more curved and equal post-marginal.

4. EUPELMUS REDINI Girault **argentilineus**, n. var.

As typical form but entirely purple except a linear exfoliation along the whole of tibia 2 beneath, this silvery. Lateral ocelli nearly twice wider apart than either is distant from median. Tarsi more or less brown beneath; middle tibial spur brown; scutum densely pilose.

A female, March 23, 1916, Launceston, Tasmania.

5. EUPELMUS EXTRAORDINARIUS Girault.

Fore wing with two eye-spots. Aeneous; knees, tibial tips, tarsi except 1 of 3 and most of tibia 2 except proximad, brown; ovipositor shortly extruded, white except at base narrowly; eye-spots small, elliptical, separated by more than their length, the caudal isolated from caudal margin; postmarginal over twice the stigmal; silvery band abdomen wide; ocelli in a flat triangle, lateral closer to eye than to

(1) The writer desires to thank all who gave aid. The first (and only other) part was printed in Records S. Austr. Museum, part, iii., 1927, pp. 309-338.

median; funicles 2-3 over twice longer than wide, exceeding pedicel, latter brown at apex. Cephalic mesopleurum pilose, a row of elongate hairs across neck of prothorax (dorsad). Antennae somewhat above eye ends. In table follows *E. giottini*.

A female, Cairns district (A. M. Lea).

#### 6. EUPELMUS CAESAR Girault.

Runs to *E. chauceri* but differs from that species and *E. nelsonensis* by colour of the legs; in the same way from *E. shakespearei*; like *E. brutus* but femur 3 aeneous for proximal  $\frac{3}{4}$ ; tibia 3 aeneous above for proximal  $\frac{2}{3}$  except just at base. The rows of thimble punctures along the eyes down the face are very distinct, in the other species usually absent or obscure. Mesopleurum naked in all. Ovipositor here nearly half abdomen, narrowly blue at base and apex, but at latter more widely, middle half or more white. Fore tibia aeneous above and below only.

The species is also characterised by having the first four segments of the abdomen deeply notched at hind margin; and the whitish hairs of the face, lobes of scutum and prepectus conspicuous.

Four female type specimens reared from *Eublemma* species on *Ceroplastes rubens*, Custard apple, Redland Bay, February 23, 1926 (A. A. Girault and W. A. T. Summerville). Two cotype females reared from larva *Lygropia clytusalis* Walk., "Currajong Bag-shelter Moth," Darwin, North Australia, November 1, 1913 (G. F. Hill).

#### 7. EUPELMUS MAWSONI Girault SOLIS Girault.

A female, Adelaide, by sweeping; a female, Mount Lofty, South Australia (J. G. O. Tepper). Femora entirely yellow mesad except 3, so also the tibiae.

#### Genus PARODERELLA Girault.

##### 1. *Paroderella goethei*, n. sp.

To follow *P. semiputata*. Frons the same but ocelli equidistant (lateral much closer to eye than to median).

Dull reddish, the head and antennae except scape, aeneous; hind margin pronotum, cephalic mesopleurum, hind margin of segment 2 of the abdomen, purple, tegulae black; ovipositor  $\frac{1}{2}$  abdomen, white. Hind coxa purple at base above. Fore wing nearly thrice longer than wide, truncate and widest at apex, fuscous, ciliated on about basal half, venation to costa at apex, hence marginal vein punctiform. Joint 3 of the funicle equal to the pedicel, 2 longest, nearly thrice longer than wide. Pronotum with a median sulcus. Head and eyes pilose, also dorsal abdomen which has a velvety appearance. Scutum hispid.

A female, Chinchilla, Queensland, February, 1928 (A. P. Dodd).

#### Genus METAPELMA Westwood.

##### 1. *METAPELMA GOETHEI* Girault.

The type is in the South Australian Museum, cotype in Queensland Museum.

#### Genus CERAMBYCOBIUS Ashmead.

##### 1. *CERAMBYCOBIUS PAX* Girault.

A female specimen from Strahan, Tasmania (H. J. Carter and A. M. Lea). Tibia except ends metallic, tarsi black except joint 1.

## Genus NEANASTATUS Girault.

## 1. NEANASTATUS DESERTENSIS Girault.

A female, Melrose, South Australia, October (A. M. Lea).

## Genus EUSANDALUM Ratzeburg.

1. *Eusandalum longiannulum*, n. sp.

Head as long as wide, antennae at eye ends, the rather large, round, somewhat bulging eyes equal to cheeks, the scrobes forming a deep V-shaped cavity with thick-ridged sides which on vertex form two obtuse "horns." Funicle 2 about 7 times longer than wide, rest gradually shortening, 1 quadrate, pedicel small.

Abdomen elongate, last segment stylate and compressed, extending nearly to apex ovipositor and one-third rest of abdomen, latter twice length thorax plus head. Postmarginal vein elongate, equal marginal, over four times the stigmal. Vertex subquadrate, finely cross-lined, caudal margin concave, cephalic excavated and "horned." the ocelli nearly in a straight line on cephalic margin, lateral close to eye, rather farther from median. A tubercle between antennae. Scape extending far above vertex. Eyes bare.

As *E. compressiscapus* but fore wing with a deep wide, midlongitudinal fuscous stripe, apex to base and touching apex of the short stigmal, latter with distinct neck; funicles and postmarginal longer.

A female, Georgetown, Tasmania, November 16, 1914.

## Subfamily SIGNIPHORINAE.

## Genus MATRITIA Mercet.

1. *Matritia hebes*, n. sp.

As *M. thusanoides* but hyaline band of wing 1 a triangle whose base is distad and the length of the stigmal vein distad of the apex of that vein, and whose apex is lost in an hyaline area from the marginal vein, and which ends at about centre, but meets another clear area on caudal margin opposite most of submarginal vein; the distal margin of the farthest clear area is acutely concaved. Tibia 1 entirely black. Distal fringes just exceeding stigmal vein. No accessory discal bristle on wing 2.

Head and thorax smooth, a few indistinct pin-punctures. Pedicel not  $\frac{1}{2}$  scape. Lateral ocellus close to eye, far distant from median.

Three females from spider eggs in a leaf-nest. Tasmania.

## Subfamily ENCYRTINAE.

## Genus EPICHEILONEURUS Girault.

1. *Epicheiloneurus cinctiventris*, n. sp.

Abdomen with a silvery cinctus across apex segment 2 dorsad. Purple.

Head, scape save apex, leg 1, tip tibia 3, tibia 2, neck of thorax, orange; tarsi, knee 3, tegula at base, femur 2 mostly, silvery. Fore wing with a wide, deep cross-stripe from bend of submarginal vein distad to a point half way to apex from apex of stigmal. Scutellum, axillae, green, with sparse hairs, former with no apical bristles. Hairless line with about 9 lines cilia proximad of it and from which proceeds a paired curved line to base, this and first few lines near base, coloured, rest pale; hairless line closed in middle of wing and also against venation.

Frons wide. Distal three funicles with several flattened bristles on apex of one side. A pair of lines of discal cilia along submarginal to base. Marginal four

times longer than wide, twice the stigmal, postmarginal shorter than stigmal. Scape clavate, distinctly compressed and dilated. Pedicel exceeding funicle 6.

A female, Mount Lofty, South Australia, in tussocks.

Genus ANAGYROPSIS Girault.

1. ANAGYROPSIS CICADA Girault.

Both sexes, Mount Pleasant, South Australia (Loveday), February 9, 1897, from galls and lerp. Also two large females, Cradle Mountain, Tasmania (H. J. Carter and A. M. Lea).

The male is coloured like the female but the antennae are entirely lemon and curious. There are four large, equal ring-joints and a long, cylindrical, thick 3-jointed club whose joint 2 is shortest, half longer than wide, 1 and 3 each twice longer than wide. The club is densely hispid, the hairs short. The pedicel and scape are short, latter much dilated but longer than wide.

In the male there is also another curious modification which I have never as yet met with in this family. The middle tarsi are black, while the spur is flattened and spindle-shaped and also black.

2. *Anagyropsis longistylus*, n. sp.

As *A. channingi* but funicles 1-2 longest, nearly twice longer than wide, exceeding the short pedicel; ovipositor two-thirds the abdomen's length, latter produced into a very narrow, elongate stylus, which nearly attains apex of ovipositor; postmarginal a bit shorter than stigmal; flagellum except basal part pedicel, yellowish. Tibia 3 immaculate.

Scape's dilation not great, distad, the scape clavate, dorsal margin serrate. Mesopleurum bare. Wing 2 with 28 lines of dense discal cilia.

3. ANAGYROPSIS HOWARDII Girault.

A female, attracted to light, Rockhampton, Queensland (A. M. Lea).

The frons is punctate, the ocelli nearly equidistant, lateral near eye. In the above specimen, the apical half of coxa 2 was yellow.

Genus COCCIDOXENUS Crawford.

1. *Coccidoxenus aeneoculex*, n. sp.

As *C. minutella* Girault but frons moderately wide (scape a bit pale beneath at apex), leg 2 yellow save coxa and a blotch above on tibia at basal  $\frac{1}{4}$  (near base); scape with some distal dilation; wing ciliated to base, costal cell entirely ciliated; apex tibia 3 rather widely pale (more so ventrad); discal cilia distad of venation distinctly finer, very fine and dense. Tegulae dark save across base.

Moderately small species, the ovipositor a bit extruded. Funicles quadrate, enlarging distad, half length pedicel.

One female, Lucindale, South Australia (A. M. Lea).

Genus EPIENCYRTOIDES Girault.

1. EPIENCYRTOIDES QUINQUEDENTATUS Girault

As *E. axillaris* but cinctus of tibia 2 short yet exceeding the short white proximad of it; coxa 1, femur 2, femur 1 (except at sides), tibia 1 at base, con-colourous; jaws 4- and 5-dentate, 4 of 5-dentate minute but distinct, 5 as in the other mandible. Wings clear. Scape, club and pedicel above black. Funicles 5-6 quadrate. Postmarginal equal marginal, a bit exceeding stigmal. Four lines cilia proximad hairless line, distad of it cilia fine and uniform. Submarginal setae long bristles.

Male antennae 5-jointed, 2 ring-joints, 2 half of 1 which is somewhat wider than long; a very long, solid, hairy club, which is yellowish.

Ovipositor shortly extruded.

Reared from *Chionaspis ? eucalypti* Froggatt, on loganberry, Melbourne, Victoria, March 2, 1927 (G. F. Hill). Paratypes in South Australian and Queensland Museums.

Genus RHOPALENCYRTOIDEA Girault.

1. RHOPALENCYRTOIDEA DUBIA Girault.

A female and a dozen more in another lot, Melrose, South Australia, October (A. M. Lea).

The funicles 1-3, 4-6 are usually in two groups, the second exceeding the first but all quadrate. Sometimes 3 is equal 4 and therefore belongs to the second group. Sometimes the postmarginal vein is a bit shorter than the stigmal.

This is a variable species. I have once redescribed it from New South Wales under the name *R. cinctifemur*.

2. *Rhopalencyrtoidea austrina*, n. sp.

As *R. claripennis* but all funicle joints twice longer than wide, 1 shortest, 2 a bit longer, subequal to the pedicel; 2 of mandible longer than 1; fore wing lightly infuscated, more deeply so across from marginal and stigmal veins, latter subequal, distinctly shorter than the postmarginal vein; only 2 lines of cilia close the mouth of the hairless line at caudal margin; middle tibia purple nearly to apex; scape subrectangularly dilated. Palpi dark, 3- and 4-jointed, 4 of maxillary elongate. Second wing densely ciliate, wide, 26 lines of cilia which do not extend quite to base.

A female, Strahan, Tasmania (H. J. Carter and A. M. Lea).

Genus EPIBLATTICIDA Girault.

1. *Epiblatticida puparia*, n. sp.

Jaw 3 obtuse, not widened. Frons of moderate width.

As *E. lambi* but coxae, femora (2 only washed from base), tibia 1 at basal one-third (often), and tibia 3 more or less at basal  $\frac{1}{4}$  purple; scape, apex pedicel, funicles 5-6, legs (yellow), knee 1 widely, white; funicles 1-4 dusky pale. Scape more or less dusky. Venation black, postmarginal less than half the marginal, half stigmal. Three lines of loose and coarser cilia, proximad hairless line and one line along submarginal to base.

Abdomen depressed, beehive-shaped, smaller than thorax, ovipositor extruded not quite for half length of abdomen. Sculpture very fine. Vertex, upper thorax with scattered short, black setae; a few small punctures on vertex.

Male similar but frons wider, antennae filiform, scape less dilated, dusky, pale at apex; club longest of flagellum, solid, hairy, funicle 1 twice longer than wide, longest, 6 a bit longer than wide, equal pedicel. Funicles with longish, irregularly placed, soft hairs.

Reared from a puparium, Byfield, Queensland (J. L. Froggatt), March 29, 1926. Cotypes in Queensland Museum.

Genus APHYCUS Mayr.

1. *Aphycus nigrivarius*, n. sp.

Golden, wings clear, black as follows:—A wide stripe across upper occiput, face of prothorax, nearly cephalic half scutum, pronotum laterad, axillae except laterad and a mark on scutum in front of them; a large, acute triangle on scutellum with its apex at base and the mark attaining nearly to apex of the region, where

it terminates in a cross-stripe; dorsal thorax along scutellum; propodeum except meson and lateral margins; meson upper abdomen widely (at apex entirely across). Legs with faint traces of dusky spots. Scape moderately dilated. Jaws 2-3 shallowly divided, jaw teeth small.

Funicles 1-3 equal, globular, rest enlarging, 6 quadrate, subequal pedicel. Postmarginal equal the punctate marginal; hairless line closed by several lines, discal cilia to base. Scutum with scattered, short setae.

Type a female, Brisbane (on a gum leaf), Queensland (A. R. Brimblecombe), September 30, 1926. Cotypes, a series reared by Mr. G. F. Hill from *Eriococcus coriaceus*, Hawthorn, Victoria, April 1, 1927. In the cotypes the black of scutum was less and that of scutellum scarcely produced cephalad from the cross-stripe. There are two dusky blotches on tibia 3 above, base and apex. In the male, the axillae, scutellum, all of scutum except latero-caudal corner, dark green. The flagellum is lighter, with long hairs, the club solid, long, funicles much shorter,  $\frac{1}{2}$  longer than wide, exceeding pedicel.

#### Genus CRISTATITHORAX Girault.

##### 1. *Cristatithorax sublimus*, n. sp.

Differs from *C. novimandibularis* in having tibia 1 purple except apex, abdomen purple only widely at base above, a spot above and below middle knee purple. Cephalic ocellus twice farther from lateral than latter arc from each other. Elsewise as in *C. mackayensis*.

Reared with *Coccophagus exiguiventris* at Darwin, North Australia (G. F. Hill).

#### Genus NEOCLADIA Perkins.

##### 1. *NEOCLADIA HOWARDI* Perkins.

A male, reared in association with "*Phlyctaenodes pilosus* Pascoe," South Australia.

The club is elongate, solid, subequal to the branches which are narrower at base and above armed with stout, long spines; joint 6 of the funicle is distinctly longest, 5 quadrate, rest wider than long; club much exceeding the scape. Labial palpi 3-jointed, 2 small, 3 longest but not long, rather swollen. Marginal vein longer than wide, the postmarginal distinctly exceeding the stigmal. Fore tibia all yellow beneath.

The teeth of the mandibles were not seen in this specimen, but after mounting this is often impossible as the jaw itself must be dissected off and floated. There is a branch from each joint of the funicle.

#### Genus ARHOPOIDEUS Girault.

##### 1. *ARHOPOIDEUS BREVICORNIS* Girault.

A female reared from wattle galls, May, 1897, South Australian Museum.

There were three distinct lines of cilia proximad of the hairless line; the postmarginal vein in this specimen was distinct, short.

##### 2. *Arhopoideus semiargenteus*, n. sp.

Fore wing with a wide smoky band across it from costal margin distad of venation (touching base of stigmal vein and all of postmarginal) and thus characterised. Aeneous, head and thorax densely, finely punctate; tarsi, fore tibia beneath, at sides and apex, tibia 2, basal third hind tibia and the linear exfoliation of the scape at apex beneath, silvery. Joints 3-5 of the funicle a little wider than long. Second wing obtuse at apex, 20-22 lines of cilia. Pedicel subequal to joint 1 of the funicle, funicle 2 quadrate. A short postmarginal vein.

One female, North Pine River, Queensland, November 17, 1928 (H. Hacker).

The palpi in this genus are 1- and 2-jointed, and the group is thus further characterised.

Genus AENASIELLA Girault.

1. AENASIELLA ANALIS Girault.

Several females labelled: "Parasites of *Brachyscelis*, Jetulpa, 2/Neita (Mrs. Tarrant), 11.3.02. Emerged June 25, 1903."

The scutum is densely pilose. Of the 8 lines of discal cilia proximad of the hairless line, the fourth is almost on over cephalic half, so that there are two groups of 3 and 4 lines. The maxillary palpi bear a conical tooth-like projection at the base of the constricted basal part, giving the appearance of a bifid or cleft apex. This character, that of the divided ciliation back of the hairless line and the shorter ovipositor and somewhat larger abdomen distinguish the species from *Rhopalencyrtoidea dubia* which it closely resembles.

In the original description the name of this species was misspelt *amplis*.

Genus COPIDOSOMA Ratzeburg.

1. COPIDOSOMA AUSTRALIA Girault.

A female, Sydney, New South Wales (A. M. Lea).

The frons is punctate.

Genus EUCHEILONEUROPSIS Girault.

1. EUCHEILONEUROPSIS ABNORMIS (Girault).

A female, Sydney, New South Wales (A. M. Lea).

The silvery part of the middle tibia (over basal half) was not purplish beneath. Lateral ocellus near eye, very far from the median.

Genus PARAENASOMYIJA Girault.

1. *Paraenasomyija feralis*, n. sp.

As *P. orro* but ovipositor not extended, all dark purple except knees, tarsi tibial tips; wings with a slight stain against marginal and stigmal veins; funicle 6 is nearly as long as the others (joint 1 of the club longer than wide, exceeding 1 of the funicle in width and length); 6 loose lines of discal cilia proximad of the hairless line, several lines to base cephalad and caudad; marginal vein a bit longer than wide, half the stigmal, latter somewhat shorter than the postmarginal; costal cell entirely ciliate. Dilation of scape linear and distad. Wings clearer proximad of the hairless line. Abdomen not twice longer than wide at base. Scutum pilose. Maxillary palpus with 4 elongate, 1 long, rest short; 3 of the labial palpus shorter than 1, 2 shortest. Bulla and palpi dark. Joints of the funicle slightly shorter than pedicel.

A female, Adelaide South Australia (J. G. O. Tepper).

Subfamily APHELININAE.

Genus ABLERUS Howard.

1. ABLERUS RIEA Girault.

Runs to *A. pan* in my revised table and is like *A. hyalinus*, but antennae black except apex pedicel, only the distal end of the parapside is pale, funicles shorter, 3 transverse, fringes one-third to one-half wing width; 2-3 lines coarser, dark cilia back from stigmal, discal cilia distinct, not dense, 12 lines. Caudal fringe wing 2 exceeding width. Funicle 1 equal pedicel and 2, half longer than wide. Head ivory, deep aeneous on face below antennae but pale at meson or immediately beneath them.

Type and cotype female reared from a coccid on *Callitris robusta*, Injune, Queensland, April, 1927 (J. H. Smith). The cotype, as usual, for the Queensland Museum.

Genus COCCOPHAGUS Westwood.

1. COCCOPHAGUS EXIGUIVENTRIS Girault.

As description of *C. pulcini* but differs as follows:—Uniformly dull honey; stripes of abdomen usually 4 (4-5), 1 and sometimes 2 widely interrupted at meson, 4 abbreviated each side; antennae of uniform colour, honey; funicle 1 exceeds 2; lateral ocelli twice closer to eye than to median; setae from marginal smaller than those from submarginal; axillae as pilose as scutum and scutellum, latter with a slender seta each side at apex; pilosity white; stigmal vein oblique, globular, its neck as long as its knob; fringes at apex short.

Abdomen smaller than thorax. Scutellum naked mesad apically.

Pedicle of male globular, flagellum filiform, distal  $\frac{1}{2}$  abdomen black, rest pale with two brownish marginal dashes between base and middle.

Reared from a large *Lecanium* (No. 316, W. W. Froggatt), Darwin, North Australia, September 6, 1916 (G. F. Hill). Ten male, female types and paratypes upon one card mount.

Subfamily PERILAMPINAE.

Genus MESELATUS Girault.

1. MESELATUS FASCIATIPENNIS Girault.

A female, Sydney, New South Wales (A. M. Lea).

In this specimen the entire head was black. The long hair of lateral scutum and so forth is from punctures. Propodeal median carina forked. Distal funicles twice wider than long. Propodeum reticulate, rough in places.

2. MESELATUS SUBTRIVENTRIS Girault.

Many specimens of both sexes from Port Jackson figs (A. J. Coates), Sydney, New South Wales.

Scutellum with an elongate seta at apex; cilia of fore wing rather dense, the wing lightly embrowned to apex from about distal one-third submarginal vein. Marginal and submarginal bristles gross. Elongate setae from dorsal hind tibia and also from femur 3 beneath and above (in the male more stout and more conspicuous, the femur much enlarged). Scattered elongate bristles on thorax.

The male antenna bears one less funicle (1 + 1 + 1 + 6 + 1), the ring-joint distinctly longer than wide, exceeding funicles, the pedicle longer than in the female.

Genus SYSTOLOMORPHA Ashmead.

1. SYSTOLOMORPHA THYRIDOPTERYGIS Ashmead.

Many specimens from galls of *Cylindrococcus casuarinae*, November, 1907, Victor Harbour, South Australia (D. H. Cushman). A female, Tarcoola (A. M. Lea).

Genus COELOCYBA Ashmead.

1. COELOCYBA PERSIMILIS (Girault).

A female, Lucindale, South Australia (A. M. Lea).

Vertex and frons with numerous umbilicate punctures. Lateral ocellus over twice closer to the eye than to the median. Pedicle a bit longer than wide. Hind coxa enlarged, compressed. One hind tibial spur very short. Scutum, parapside, cephalic half scutellum with many short, black setae. Band 6 of abdomen a transverse mark across meson widely. Proximal margin of the discal ciliation of fore wing wedge-shaped, acute.



## Genus COELOCYBELLOIDES Girault.

## 1. COELOCYBELLOIDES MEDIOLINEATUS Girault.

Launceston, Tasmania, No. 2010, December 7, 1915.

The stigmal vein is only half the length of the marginal. The wings are more or less embrowned. Head pin-punctate, the punctures bearing minute setae. Both palpi are 2-jointed. The amount of black on the parapside varies, and the centre of the mesopleurum is black as well as the base of the hind coxa.

## 2. COELOCYBELLOIDES PULCHRIVARIEGATUS Girault.

Five males, two females, reared from galls on *Eucalyptus*, Tintinara, South Australia (J. G. O. Tepper). Emerged March 2, 1887.

The maxillary palpi are 4-jointed in both sexes, the labial apparently 3-jointed. Hence the species is not congeneric with *C. mediolineatus*. The segmentation of the palpi is very little known in this group, perhaps because of the difficulty in seeing them.

3. *Coelocybelloides pulchra*, n. sp.

As *C. aureus*, but base of abdomen, pleura and venter of thorax, prothorax also lemon; dorsal thoracic sutures not black, dorsal scape except at base, dorsal pedicel, green; no black on dorsal thorax except the spiracle and a spot near the base of the second wing. Apex of abdomen widely black and the curved stripe 4 is rather close to it. Venation yellow distad of the submarginal vein. Funicle 1 as wide as 2, each  $\frac{1}{4}$  longer than wide and nearly as long as the pedicel. A large species with black mesoventer.

A female, Ooldea, South Australia.

4. *Coelocybelloides nigrisetae*, n. sp.

From *C. pulchra*: Thoracic sutures black, black setae along each side of the scutellum and along the parapsidal furrows; abdomen as in *C. aureus* but the cross-bands cover the entire surface from basal  $\frac{1}{3}$  to distal  $\frac{2}{3}$ ; the pubescence is black, grey in *pulchra*. Venation black except basal  $\frac{1}{2}$  of the marginal vein.

Both species differ from *C. aureus* in the more widely-spaced bands of the abdomen.

A female, Ooldea, South Australia.

## Genus PERILAMPUS Latreille.

## 1. PERILAMPUS TASMANIENSIS Girault.

A female, Tasmania (A. Simson, No. 2709).

## Genus EPELATUS Girault.

## 1. EPELATUS EURYTOMOIDEA Girault.

The type locality is Melrose, South Australia, October (A. M. Lea). The first funicle joint is nearly twice longer than wide.

## Subfamily CLEONYMINAE.

## Genus EPISYSTOLE Girault.

## 1. EPISYSTOLE POETA Girault.

One female, Murat Bay, South Australia.

## Genus PLATYGERRHUS Thomson.

1. *Platygerrihus incola*, n. sp.

As *P. dugandani* but fore wing with a complete loop, narrow centrally with suffused cross-stripes from each end; and dusky apex; segment 2 glabrous; stigmal vein over half the postmarginal; legs yellow for the most part except coxae;

femur 1 is somewhat more swollen than 3 and deeply excised beneath at apex (1 less than 3 in other and not excised).

Scape red-brown except apex; funicle 2 equal the long pedicel, femora mostly pale, all blotched with aeneous laterad (across near apex of 1, 3, along lower margin at distal  $\frac{1}{2}$ ); tibia 1 beneath except each end, tibia 2 with a narrow, 3 with a wide middle cinctus. Funicle 1 longer than wide. Tibiae flavous at base and apex.

Type female, Kuranda, Queensland, November, 1919 (A. P. Dodd). Also at Gordonvale, March, December (paratypes in Queensland Museum).

A male from Kuranda had the cinctus of tibia 2 as wide as that of 3, and this may be true for the female.

In the collections of the South Australian Museum there is one female, Kangaroo Island (A. M. Lea).

## 2. *Platygerrhus froudeii*, n. sp.

As *P. dugandani* but tibia 2 all yellow except for a short cinctus near base, wings clear, and postmarginal distinctly shorter than marginal and a bit over twice the length of the stigmal; distal  $\frac{1}{2}$  of the tibiae yellow (frons moderately wide); funicle 2 three and a half times longer than wide, equal the elongate pedicel.

Gordonvale, Queensland, October, November, 1920 (A. P. Dodd). Cotype in Queensland Museum.

## 3. *Platygerrhus pallidicoxa*, n. sp.

As *P. incola* but smaller, funicle 2 subquadrate, distinctly shorter than pedicel, femora not *much* swollen, 1 not excised beneath and tending to be slender. All coxae pale. Scape rather widely aeneous at apex.

Three females, Kuranda, Queensland, December (A. P. Dodd). Cotype in Queensland Museum.

## Genus AMEROSTENUS Girault.

### 1. *Amerostenus varidentatus*, n. sp.

Mandibles 3- and 4-dentate, hence so characterised. Scape pale at base.

Otherwise like *A. aereipes* but first two pairs of tibiae aeneous above only, middle femur yellow dorso-mesad, postmarginal vein as in the genotype, that is, elongate, about twice the length of the stigmal, the latter with a long, slender neck. Joints of the funicle subequal, a bit wider than long, distinctly shorter than the pedicel. Propodeum short at the meson, there carinate. Thorax scaly reticulate, a few indefinite punctures, pronotum transverse, axillae advanced. Clypeus obtusely incised at each corner of apex. Tooth 3 of the 3-dentate jaw widely truncate, 4 of the other jaw obtuse and shorter.

Joint 1 of the middle and hind tarsi subclongate, much longest, in middle tarsus equal to the elongate tibial spur. The male similar but the fore tibia is entirely pale.

A male and two females from galls on the leaves of *Eucalyptus obliqua*, Blakiston, South Australia (T. D. Smeaton). Emerged May, 1888. With *Rhichnopeltella* and others.

## Subfamily AGAONITINAE.

### Genus PLEISTODONTES Saunders.

#### 1. *Pleistodontes semiruficeps*, n. sp.

Like *P. froggatti* in structure of the antennae and head but entirely black, the head red except proximal (or dorsal)  $\frac{1}{4}$  (from ventral eye ends), this part of the head, jet. Legs and first five antennals red-brown. Ovipositor not quite as long as abdomen.

Many females on Banyan figs, Lord Howe Island (A. M. Lea).

## Subfamily PTEROMALINAE.

## Genus SPALANGIOMORPHIA Girault.

## 1. SPALANGIOMORPHA FASCIATIPENNIS Girault.

Two females from rice grain, Murray Island, Torres Strait. Two others labelled as being parasites of small beetles, June, 1891, Dr. Sterling, Central Australia.

According to Masi's table this genus is *Chaetospila*, the funicle being 5-jointed and the axillae separated. The species, so far, has not been referable to any older description, but I have not as yet seen all of them.

## Genus SPALANGIA Latreille.

1. *Spalangia punctulaticeps*, n. sp.

Head densely rugulose-punctulate with many scattered umbilicate punctures. Wings dusky. A narrow median groove to the scrobes from the median ocellus. Funicles 1-3 wider than long, together about as long as the pedicel. Pronotum, scutum densely scaly with scattered pin-punctures on the former and also upon the scaly parapsides; a weak cross-row of fovea on scutum distad of the middle, from thence glabrous like the scutellum and axillae, and like these with a few punctures along lateral portions (on scutellum in two longitudinal rows, leaving a wide, smooth mesal area); a cross-row of pin-punctures on scutellum except at mesal part and toward apex; axillar sutures punctate. Propodeum with two foveate mesal grooves which join at middle and run as one to apex, narrowing much; glabrous but densely punctate laterad of the spiracle except at cephalic margin, this between the meson and spiracle foveate. Segments 2 and 3 equal, united half the surface, 4 a bit longer than either.

A female, Kangaroo Island (A. M. Lea).

## Genus PACHYNEURON Walker.

## 1. PACHYNEURON KINGSLEYI Girault.

A female in October, Melrose, also at Gawler, South Australia (A. M. Lea).

## Genus PTEROMALUS Swederus.

## 1. PTEROMALUS PUPARUM (Linn.).

A female, Melrose, South Australia (A. M. Lea), in October; another by sweeping, Adelaide (N. B. Tindale).

## Genus PARURIELLA Girault.

## 1. PARURIELLA AUSTRALIENSIS Girault.

Two males, 5 females, Melrose, South Australia, October (A. M. Lea).

There were one or two thimble punctures on the scutum and scutellum in these specimens; the vertex bears numerous such punctures. Maxillary palpi 4-jointed. The male is like the female but joints 1-2 of the funicle are twice longer than wide, much exceeding the pedicel.

## Genus TOMOCERA Howard.

1. *Tomocera io*, n. sp.

The same as *T. transversifasciata* but abdomen as in *T. saissetiae* (i.e., above black with middle  $\frac{1}{3}$  yellow), as are also joints 1-2 of the funicle, but 2 is quadrate (1 of funicle in *T. saissetiae* is not half the size of 2, which is longer than wide).

A female, from galls on leaves of *Eucalyptus obliqua*, Blakiston, South

Australia (T. D. Smeaton). Hatched May, 1888. With *Amerostenus varidentatus*, *Rhincopeltella*.

The distal infuscation was faint, the few setae of the scutum short. Palpi 2-jointed, the joints subequal in each palpus and quite as in *T. saissetiae*.

Genus *ROPTROCEROPSEUS* Girault.

1. *Roptroceropseus citripes*, n. sp.

As *Paruriella 4-dentata* in palpi, and so forth, but coxa 2 is aeneous, flagellum dark brown, propodeum four times wider than long, funicles subquadrate and equal the pedicel, tooth 2 of the jaw is largest. Differs from *R. albipes* only in the dark club and golden coxa 1.

The male has the scape foliaceously exfoliated rectangularly, funicle 1 distinctly exceeds the subglobose pedicel; there are 6 funicle joints all clothed with longish, stiffish hairs, 6 quadrate, club 2-jointed, conic and acute at apex.

Joint 4 of the maxillary palpus (female) is elongate, equal to the rest of the palpus. Middle tibial spur elongate, thin.

This genus belongs to the Miscogasterinae.

Several pairs from flower-galls of *Acacia pycnantha*, Norwood Gardens, South Australia, November 22, 1891.

Have also seen two females reared from galls on *Acacia aulacocarpa*, Cooroy, Queensland, August 6, 1928 (W. A. T. Summerville).

Genus *NASONIA* Girault and Sanders.

1. *Nasonia abnormis* Boheman.

A female, Mount Searle, Northern Flinders Range (H. M. Hale and N. B. Tindale).

The species has been synonymized recently with one of Walker's species. The genus *Mormoniella* Ashmead, or rather the name of a genus proposed by Ashmead has been substituted by some for *Nasonia*, but *Mormoniella* was never connected with a recognisable species, so that the name is but a name and nothing else. It was preferred merely because it preceded the name *Nasonia* by a few pages. Girault and Sanders subsequently based *Nasonia* upon the above species named by Ashmead *brevicornis*, but never described except by Girault and Sanders. Some years ago I became cognisant of the identity of *brevicornis* with the European *abnormis*, but before I could publish on the matter my notes were lost.

2. *Nasonia miltoni*, n. sp.

As *N. abnormis* but the clypeus slightly incised or bilobed at meson of apex, funicles 1-3 are longer than wide and 1 is distinctly smaller than 2, which is almost as long as the pedicel and longest; club 1 is longer than wide, half the length of the club and a bit longer than the pedicel; it exceeds any funicle joint. The post-marginal vein is somewhat shorter than the marginal. The scutellum bears obscure pin-punctures. The median carina is obscure and a spiracular sulcus is made impossible by a carina which crosses just behind the spiracle. Also segments 2 and 3 of the abdomen are large and equal, together occupying the same space as the larger 2 does in *abnormis*.

A female, Adelaide, South Australia (R. J. Burton).

Genus *ISOPLATOIDES* Girault.

1. *Isoplatoides quadridentatus*, n. sp.

Two marks on fore wing, a wider one from the bend of the submarginal vein and basal marginal across, the other a substigmal spot from the apex of the stigmal vein to the middle of the wing and of moderate size. Parapsidal furrows complete.

Propodeum non-carinate, a fovea on cephalic margin about midway from meson to spiracle. As *I. quadriputulatus* otherwise. Jaws 4-dentate. Middle femur mesad more or less yellow.

A female, Barellan, New South Wales (A. M. Lea).

## 2. *Isoplatoides tripustulatus*, n. sp.

Like *I. bipustulatus* but furrows (apparently) *complete*, and there are three fuscous spots on the wing in a curved row from the bend of the submarginal vein to the apex of the stigmal vein; the third or distal of these is largest, toward centre and not touching the stigmal knob; the second is closer to the first. Wing otherwise is in the named species. (Head missing.)

A female, mounted with *I. bipustulatus*, and *I. bifasciatus*, South Australia (Macleay Museum). Type in the Macleay Museum.

## Genus PSEUDANOGMUS Girault.

### 1. PSEUDANOGMUS FUSCIPES Girault.

A female, Parachilna, Flinders Range (Natural History Expedition).

The parapsidal furrows are visible only in certain lights. Propodeal spiracle elliptical, small. Clypeus strongly bilobed. The lateral ocellus is quite close to but not at the eye, twice closer to eye than to the median ocellus. The scrobes form an obtuse, deep, long median channel.

## Genus ORMYROMORPHA Girault.

### 1. ORMYROMORPHA TRIFASCIATA Girault.

A female on *Atriplex*, South Australia; another, Bribie Island, Moreton Bay, Queensland (H. Hacker and A. M. Lea).

## Genus MERISMOMORPHA Girault.

### 1. MERISMOMORPHA ACUTIVENTRIS Girault.

A female, Melrose, South Australia, October (A. M. Lea).

Segments 2 and 3 of the abdomen occupy not quite half the surface; in this specimen 5 was cross-linear, but I think the length varies according to whether or not the part is retracted.

## Subfamily MISCOGASTERINAE.

### Genus PAREROTOLEPSIA Girault.

#### 1. PAREROTOLEPSIA PUNCTATIFACIES (Girault).

A female, South Australia, Adelaide (J. G. O. Tepper).

The lateral ocelli in this specimen were distinctly closer to the median than to eye.

#### 2. *Parerotolepsia unimacula*, n. sp.

As *P. aereifemur* but wing with a distinct central blotch under all of marginal vein and touching apex of stigmal. Head, scutum, parapside with numerous scattered punctures. Clypeus produced, convex at apex. Lateral ocellus a bit closer to eye. Funicle 1 quadrate, a bit shorter than pedicel, rest wider than long. Scape metallic (so coxae and femora). Venation very dark, postmarginal equal stigmal, marginal swollen at base. Cross-suture scutellum distinct, not deep.

Propodeum with median carina only, spiracle small, round; discal cilia dense, nearly to base of marginal, none elongate; jaws black, red at apex, 2-4 distinctly shorter than the acute 1, 2 longer than 3 or 4, latter equal, obtuse. Maxillary palpus with at least two elongate apical setae.

A female, Adelaide, South Australia (J. G. O. Tepper).

## Genus SYSTASIS Walker.

1. *Systasis cecili*, n. sp.

As the original description of *S. doddi* (Girault), but the cross-suture of the scutellum is obscure, the cephalic parapside and cephalic  $\frac{3}{4}$  of the scutum thimble-punctate as well as the upper head while the lateral carinae of the propodeum are distinct. The punctures of the scutellum are not along the meson widely. The space between teeth 2 and 3 of the jaw is finely serrate.

A female, Melrose, South Australia, October (A. M. Lea).

The cephalic tibia is green only dorso-laterad. The labial palpus is 3-jointed, joint 2 wider than long; the maxillary are at least 3-jointed. Abdomen distinctly exceeding the thorax.

## 2. SYSTASIS VARIPES Girault.

Three females, Melrose, South Australia, October (A. M. Lea).

The scrobes in this species are short, semi-circular. The hind tibia in these specimens are green above for basal  $\frac{3}{4}$  except at base.

*Roptrocerella*, n. gen.

As *Roptroceropsus* but the club only 2-jointed, funicle 7-jointed (antennae 12-jointed, excluding a very short, thin first ring-joint, inserted below the middle of the face but above eye-ends by a bit). Palpi 3- and 4-jointed. Jaws 3-dentate, but 3 is only a concave truncation from the base of 2. Stigmal vein about half the length of the postmarginal, latter a bit shorter than the marginal which is distinctly shorter than the submarginal. Clypeus not produced, concave at apex. Abdomen no longer than the thorax, rather compressed and rounded. Scrobes elongate.

1. *Roptrocerella latipennis*, n. sp.

Blue-green, wings clear, knees, tibiae, tarsi, base of scape yellow. Funicle 1 somewhat wider than long, subequal the rest, half the length of the pedicel; club divided about middle, the joints nearly as long as the pedicel. Pronotum and scutum entirely umbilicately punctate, the punctures scattered over the axillae and parapside and a single line only down each side of the scutellum, latter without a cross-suture. Propodeum with a distinct median carina, the spiracle rounded, a bit away from cephalic margin, with a curved carina behind it and encircling it, no lateral carina. Fore and hind femora rather stout. Fore wing very wide, hind with 16 lines of discal cilia. Discal cilia of fore wing extending loosely to base, but there is a large, rectangular, naked area against the bend of the submarginal vein. Scutum pilose.

A female, Melrose, South Australia, October (A. M. Lea).

## Genus TOXEUMOIDES Girault.

## 1. TOXEUMOIDES AENEICORPUS Girault.

A female attracted to light, Rockhampton, Queensland (A. M. Lea).

The femora were entirely red, so they vary from red to subaeneous. Unfortunately the head of this specimen was lost while mounting it, but I can scarcely doubt its identity.

2. *Toxeumoides poeta*, n. sp.

From the genotype: Cross-suture on scutellum before the apex; petiole very short; form wider; abdomen depressed and wide above, 2 a third or more of the surface, over twice the length of 3; propodeum without a median carina; the large pronotum laterad densely punctate and hairy, parapsides glabrous with punctures far laterad. Instead of the single fovea on cephalic margin of the propodeum toward the spiracle, there is a foveate grooved line extending as far across mesal base. Scutum naked.

A female. South Australia (Macleay Museum). Type in Macleay Museum.

3. *Toxeumoides silvensis*, n. sp.

From the genotype: Abdomen shaped as in *Perilampus*, segment 3 to apex, the petiole is thrice longer than wide, distinctly exceeding the hind coxa; scutum not finely cross-lined but scaly reticulate (finely cross-lined cephalad) and more pilose; propodeum opaque and scaly and without a tuft of long, fine hairs. Jaws shorter, teeth equal. Joint 4 of maxillary palpus with a single thick and club-like cylindrical terminal seta (in genotype several unequal terminal setae, none thickened).

A female, jungle, Montville, Queensland, June 14, 1924. Type in Queensland Museum.

## Subfamily EULOPHINAE.

## Genus ARDALOIDES Girault.

## 1. ARDALOIDES 10-DENTATUS Girault.

A female, Cairns District (A. M. Lea).

Coxa 3 was submetallic, segments 3 and 4 of abdomen above also whitish except lateral margins, jaws 11-dentate. The median groove of scutellum distinct. Axillae not advanced. Wings hyaline. Vertex with stiff, scattered, not elongate hairs. Maxillary palpi 2-jointed, apex with an elongate, stiff spine plus two short, unequal, stout lateral ones towards apex, the longer from the apex of a tubercle, the shorter from the axis. There is also a minute seta on the same side just below apex.

## Genus SECODELLA Girault.

## 1. SECODELLA AENEA Girault.

A female, Melrose, South Australia, October (A. M. Lea). Joints 1-2 of funicle a half longer than wide, distinctly exceeding the short pedicel.

2. *Secodella io*, n. sp.

In my table of species runs to *S. aenea* but differs: Joint 1 of the funicle a half longer than wide, rest quadrate.

All tibiae intense blue to apex; the second and third teeth of the jaw have a few faint serrations between them.

The jaws are tridentate; the maxillary palpi bear a flat, ovate apical spine. Abdomen conical, distinctly exceeding the thorax. Scape metallic.

One female, South Australia. Females, Owieandana, North Flinders Range (H. M. Hale and N. B. Tindale); Strahan, Tasmania (H. J. Carter and A. M. Lea); Vivonne Bay, Kangaroo Island (South Australian Museum Expedition, February, 1926).

## Genus DIAULOMORPHA Ashmead.

## 1. DIAULOMORPHA AUSTRALIENSIS Ashmead.

A female, Melrose, South Australia, October (A. M. Lea).

Legs except coxae and scape except apex, were golden. The postscutellum is not so large as I have described it.

## Genus ENTEDONELLA Girault.

## 1. ENTEDONELLA AEREISCAPUS Girault.

Three females, type locality and date.

## Genus PELOROTELOPSELLA Girault.

## 1. PELOROTELOPSELLA AUSTRALIENSIS (Girault).

A female, same place as recorded in Part I.; also two more females.

2. *Pelorotelopsella rex*, n. sp.

The same as *P. cinctipes* Girault but middle tibia entirely white.

A male, Mount Lofty, South Australia (J. G. O. Tepper).

The characteristics of this species, as taken from my table of species, are as follows:—Scape blue except extreme base; of tibiae, only basal  $\frac{1}{4}$  metallic, all above in fore tibia except apex; first tooth of the mandible distinctly longer than the second. Bronze, joint 1 of the funicle thrice longer than wide, a stout, conspicuous spicule. Eyes hairy.

Disc of segment 2 of the abdomen is yellowish. Petiole nearly twice longer than wide, smooth. Second tooth of jaw only about half the length of the first. Scape compressed. Joint 1 of the funicle truncate at apex, joint 2 half the length of 1, its apex scooped out more or less. Hairs of joint 1 of the funicle not quite as long as the diameter of the joint.

## Genus METACRIAS Girault.

1. *Metacrias clara*, n. sp.

Brilliant bronze, the wings clear, legs except coxae and the scape yellow-white. Head and thorax densely, uniformly punctate, the caudal impression of scutum small, the furrows nearly complete. Joint 1 of the funicle a half longer than wide, ovate, exceeding pedicel, 2 similar but shorter, 3 globular equal pedicel and also 1 of the club. Joint 2 of the club smallest, its spicule short and stout; 3 of the funicle is wider than the pedicel. Second tooth of the jaw a half shorter than the first. Propodeum subglabrous, the median grooves deep, straight, moderately wide. Abdomen, from above, nearly round.

Characterised by the white legs and scape and unequal mandibular teeth.

Two females, Healesville, Victoria, April 12, 1929 (F. Erasmus Wilson). Type in collection of F. Erasmus Wilson; cotype in South Australian Museum.

## Genus EUPLECTRUS Westwood.

1. *Euplectrus cairnsensis* Girault.

A female, Lucindale, South Australia (A. M. Lea).

## Genus RHICNOPELTELLA Girault.

1. *Rhicnopeltella sarah*, n. sp.

Funicle 2 a bit larger than 3, latter quadrate and two-thirds the pedicel. As *R. eucalypti* Gahan otherwise or nearly.

From leaf-galls on *Eucalyptus obliqua*, Blakiston, South Australia (T. D. Smeaton), April 23, 1888. Also galls on gum, Queensland (A. P. Dodd). A female, Mount Lofty, South Australia (A. M. Lea). This latter had joints 2 and 3 of funicle subquadrate but 2 smaller.

2. *Rhicnopeltella faunus*, n. sp.

As *R. eucalypti* Gahan but all tibiae purple, narrowly golden above or dorso-laterad; no patch discal cilia against bend of submarginal; funicles 2-3 equal in length and much longer than 1, not  $\frac{1}{2}$  pedicel, latter and apices of funicles with some stout setae; differing markedly in the discal ciliation since its approaches marginal vein at distal  $\frac{1}{2}$ . Dark blue, male bright green, wing infuscation smoky against distal marginal and the stigmal.

A male, three females from galls on silver-leaved ironbark, Roma, Queensland, September 20, 1914 (H. Tryon).



## 3. RHICNOPELTELLA CITRITIBIAE Girault.

From *R. hegeli* (Girault): Funicle 2 a bit longer, 3 wider than long, only half the pedicel which is elongate; jaws bidentate. Bright green, antennae all black, no spot on hind tibia, funicle 1 only somewhat wider than long. Some stout setae from distal part of funicles; discal ciliation approaching the whole stigmal vein.

Three females in Macleay Museum from galls, Sydney, New South Wales. Types in Macleay Museum.

## 4. RHICNOPELTELLA IMMACULATIPENNIS Girault.

Three females, Mount Lofty, South Australia (J. G. O. Tepper).

## 5. RHICNOPELTELLA PURPUREA Girault.

A female, Mcrose, South Australia, October (A. M. Lea).

The discal ciliation of the fore wing in this species attains base of the stigmal vein. Mandibles equally, acutely bidentate.

6. *Rhcnopeltella depressa*, n. sp.

Abdomen depressed, ovate. Wing with a large substigmal blotch. Fore tibia golden except beneath. Knees widely, over distal  $\frac{1}{2}$  fore femur, intense lemon. Three ring-joints, the first shorter than the other two; three subequal, twice (or more) wider than long funicle joints (3-thrice wider than long), 3 not a fourth the length of the short, stout pedicel. Jaws bidentate. Antennae black, the club yellow beneath. Neck of stigmal vein shorter than the long-ovate knob. Middle tibial spur elongate, pale, spinose, much exceeding the first tarsal joint; hind tibial spur shorter, stout, long, a bit exceeding the metatarsus. Otherwise as in *R. faunus*. Setae of the vertex sparse.

A female, Tarcoola, South Australia (A. M. Lea).

*Austrolynx*, n. gen.

Similar to *Diaulinopsis* Crawford, but robust, head thick, jaws only 3-dentate postmarginal equal stigmal; tibial spurs stout, much unequal, 1 very short. Stigmal vein not elongate. Maxillary palpus 2-, labial, 1-jointed, former with 3, latter with 2 strong terminal setae.

1. *Austrolynx flavitibia*, n. sp.

Dark aeneous, wing clear, venation yellow, scape, legs, except basal two-thirds (sometimes less and usually only lateral aspect), femora and the coxae laterally, lemon; also the head more or less below the eyes. Finely reticulate.

Funicle 1 somewhat longer than wide, stout, equal pedicel, 2 quadrate; club 3 with a short, conic apical part bearing a short, stout spicule—this small part has the appearance of a fourth joint. Jaw teeth 1-2 acute, equal, strong, 3 oblique and with its apical margin feebly serrate. Vertex with numerous, scattered stout setae. Wing 2 with 12 lines discal cilia.

Propodeum at meson equal postscutellum, non-carinate. Spiracle round, rather small. Abdomen pointed, exceeding thorax.

The male is similar but the legs may be almost all yellow, the yellow of the head more distinct, venter of abdomen, dorsum of same above at base and distad in two marginal spots may also be yellow.

From several specimens of each sex mounted on a card with male *Rhcnopeltella* and *Eurytoma* and bearing the following data:—"Insects (10 kinds, 536 specimens) produced from one gall complexus collected by Mr. T. D. Smeaton

at Blakiston, South Australia, on *Eucalyptus rostrata*, April 23, 1888. Hymenoptera appeared till June 5 following"; and "From one small branchlet of red gum. No. 8 (small, black, etc.). From galls on leaves of *Eucalyptus obliqua*, Blakiston, April 23, 1888. Smeaton. Hatched in May." Another card, bearing paratype males, bore the data:—"9. Large and small brown. From galls on leaves *Eucalyptus obliqua*, Smeaton. Hatched May, 1888." A third card, bearing many females with male *Megastigmus* and *Eurytoma*, was labelled:—"9. Galls leaves *Eucalyptus obliqua*, 23/4/88. Blakiston. Hatched May 1888. Smeaton." A series of paratypes bore a similar label.

The species is associated with *Rhizopheltella sarah* described above. Cotypes in Queensland Museum.

#### Genus EUPLECTROMORPHA Girault.

##### 1. *Euplectromorpha lucia*, n. sp.

As *E. dubia* but scutum devoid of bristle-bearing pustules and of hair at over distal half (except one or two pustules, a pair cephalad and a pair caudad), so the axilla at over caudo-mesal third; head, thorax entirely black, antennae all yellow, joints of the funicle quadrate, 1 twice longer. Over distal third of the abdomen black.

A female, Kiata, Victoria, October, 1928 (F. E. Wilson). Type in the collection of F. Erasmus Wilson.

#### Genus GYROLASELLA Girault.

##### 1. *Gyrolasella aenea*, n. sp.

Green, wings lightly dusky at distal third; tarsi except last joint, knees, tibial tips, fore tibiae except below and the base of the tegula, pale; apex of the scutellum between the grooves, a dot on the prepectus, lateral margin of the axilla, margins around the base of the tegula, margin of eyes on face and (continuously) cephalic margin vertex, margin of the eyes (continuously) on vertex and upper occiput, golden. Densely scaly punctate including the non-carinate propodeum, the latter elevated mesad. Jaws 6-dentate. Joint 1 of the funicle twice longer than wide, 2 a third longer than wide, much exceeding the pedicel. Spicule large, its basal half or more stout, rest tubular. Stigmal vein long, clavate, subequal to the post-marginal vein. Flagellum armed with, besides others, stout, thorn-like setae.

A female, Carribee, Yorke Peninsula, South Australia (N. B. Tindale).

#### Genus DIAULOMYIYA Girault.

##### 1. *Diaulomyiia nigroaenea*, n. sp.

As *D. asperitergum* Girault but dark aeneous, wings clear, (scape, legs except middle and hind coxae, tegula, dull red); spiracle with a delicate carina surrounding it behind; grooves of scutellum joined around the apex; somewhat smaller than the named species. Mandibles 8-dentate. Three bristles on scutum each side of the meson in an oblique or diverging line from cephalad.

A female, Adelaide, South Australia (A. M. Lea).

#### Genus PSEUDIGLYPHUS Girault.

##### 1. *Pseudiglyphus grotiusi* Girault, *io*, n. var.

Differs from the typical form in having all tibiae concolorous at basal half. A female, Mount Lofty, South Australia.

## Genus NEOMPHALOIDELLA Girault.

1. *Neomphaloidella eucalypti*, n. sp.

Aeneous, wings clear; coxae, femora, antennae except basal half of the scape, concolorous; apices of femora 1-2 widely pale; joints of the funicle a half longer than wide and than the pedicel. Propodeum with a carina laterad of the spiracle and a median carina. Mandibles tridentate. Second wings with 13 lines of discal ciliation, obtuse at apex. Abdomen conic-ovate. Spicule distinct, small. Second two ring-joints very short. Abdomen exceeding thorax, acute distad.

A female from galls on the foliage of *Eucalyptus obliqua*, Blakiston, South Australia (T. D. Smeaton), May, 1888. Associated with *Neomegastigmus ater* and a male *Rhincopeltella*.

2. *Neomphaloidella brevistigma*, n. sp.

Black, the wings very lightly infuscated from base to a point somewhat distad of the venation. Scape, pedicel, knees, tips of the tibiae, tarsi, fore tibiae except basal half above, pale, the club suffused yellowish; postscutellum and basal half of the abdomen obscurely yellow. Stigmal vein short, oblique, much shorter than the knob. Ring-joints large, increasing distad, the first only half the length of the third. Joint 1 of the funicle a half longer than wide, a bit shorter than the pedicel, 2 and 3 equal, a bit longer than wide. Spicule short and stout, clypeus bilobed. Teeth 1-2 of the jaws equal, acute, 3 small and distinctly shorter. Second wing with 10 lines of discal ciliation, wide, subobtuse at apex. Propodeum with a median carina only, this moderately long. Sculpture usual, *i.e.*, very fine.

A female, Ooldea, South Australia (A. M. Lea).

3. *Neomphaloidella parkmani*, n. sp.

As *N. octoguttata* but postscutellum yellow, joints of the funicle much unequal, 3 a third longer than wide, equal pedicel, 1 twice longer than wide. Also differs: Less slender, scape dull red, dark above, as is also the pedicel; femora 1 and 3 dusky, 2 less so; abdomen almost as in *Neotetrastichodes electra* but the basal yellow (segment 2, nearly  $\frac{1}{4}$  surface) is absent, therefore there are but the four yellow spots on each side of the meson and commencing out from base, the first obscure and on segment 2 (therefore only three spots distinct); thus, also, the abdomen is as in *N. octoguttata*, excepting for the basal yellow. The first two ring-joints are shorter than the third (as in *electra*) but distinct. A distinct carina runs (like a lateral carina) from the lateral side of the cephalic spiracle. Maxillary palpus elongate. Jaw 3 obtuse and much smaller. No postmarginal vein. Clypeus strongly bilobate.

Propodeum scaly, with a median carina. Punctures along the lateral margin of the scutum distinct.

A female, Bribie Island, Moreton Bay, Queensland (H. Hacker and A. M. Lea).

4. *Neomphaloidella bilobata*, n. sp.

As *N. octoguttata* but not slender, antennae all black, legs yellow except coxae and femur 3, the dorsal yellow of the abdomen confined to the median line, of moderate width and from basal  $\frac{1}{5}$  to base of the distal  $\frac{1}{4}$  (apex segment 2, 3-5 or 6); joint 3 of the funicle is distinctly shorter than 1, longer than wide, subequal to the pedicel; joint 1 is twice longer than wide. Second ring-joint distinct, shortest, 3 longest. Propodeum densely, coarsely scaly, with a strong carina from the lateral side of the spiracle and a delicate x-shaped median carina; the forks of the x are not much diverged. Second wing obtuse at apex, very wide. Spicule stout.

Yellow of the dorsal abdomen dull, more or less obscurely broken at the apices of the segments. Scutellum with a grooved apex. Punctures present on pronotum (except caudal meson), lateral parapside and lateral margin of the scutum; these are distinct. Clypeus strongly bilobed. Maxillary palpus elongate, single (as usual for the group).

A female by sweeping, Mount Lofty, South Australia (A. M. Lea).  
The metatarsus is subquadrate, shortest of the joints of the hind tarsus.

#### Genus NEOTETRASTICHODES Girault.

##### 1. NEOTETRASTICHODES ELECTRA Girault.

Two females, Melrose, South Australia, October (A. M. Lea).

Joint 1 of the funicle exceeds the pedicel. The pronotum and lateral parapside are densely punctate and setigerous. In these specimens, the five cross-stripes of the abdomen were connected by a median line of black, and this blocks out a longitudinal line of yellow spots down each side of the meson (the margins are black to stripe 5); there is also a thin black stripe before (near) apex. The face is yellow down from the antennae. Maxillary palpi very elongate, 1-jointed. A short postmarginal vein. Clypeus strongly bilobed. The hind coxa was black only at basal half. Jaws tridentate.

In the original description neither the postmarginal vein nor the longitudinal stripe of the abdomen are mentioned, nor the black margins of the abdomen, but otherwise these specimens agree with it in every particular, and they have since been compared with the type (while revising the group).

The costal cell is naked except for a single line of cilia along close to the submarginal vein, the line complete and the cilia composing it slender. The discal ciliation extends to the base of the marginal vein. Ring-joints distinct, 3 largest and as in the Pteromalidae, all large and but three in number.

#### Genus TETRASTICHUS Haliday.

##### 1. *Tetrastichus perobscurus*, n. sp.

Dull black; scape, knees, tibiae and tarsi pale; venation pale; lateral margin of the scutum cephalad, postscutellum, lateral margin of the scutellum, vertex more or less against the eye, yellow; abdomen above dull golden, the apices of the segments black (making 7 black cross-stripes, including one across base, 7 well before apex). Joint 2 of the funicle longest, a bit longer than wide, shorter than the pedicel, 1 quadrate, 3 wider than long; second ring-joint thinner than 1. Spicule small, flagellar setae moderate in length. Tooth 3 of the mandible distinctly smallest. Palpi single (as usual), maxillary subelongate, labial very short. Propodeum subtransverse at meson, with a median carina only (a carina just laterad of the spiracle). Sculpture very fine.

A female, Mount Pleasant, South Australia (Loveday), February 9, 1897.  
From galls.

In the specimen the median groove of the scutum was uncertain. It was very distinct but seemed to have been formed by a contraction of the body at the scutum. However, the species has characteristics which allow of its being easily recognised.

##### 2. *Tetrastichus pontiac*, n. sp.

As *T. saintpierrei* but the yellow basal part of the abdomen has the base narrowly margined with black, and there is a marginal spot at middle and one toward apex. Moreover, the joints of the funicle are equal and barely exceed the pedicel (each about a fourth longer than wide), while the club plainly exceeds

the united length of joints 2 and 3 of the funicle. Spicule short. Scape white, antennae brown-black. Propodeum of moderate length at meson, with a median carina, the spiracle large.

Both palpi pale, single, the maxillary fully twice the length of the labial but not very elongate. Stigmal vein long-clavate. Jaws tridentate.

A female, Owieandana, North Flinders Range (H. M. Hale and N. B. Tindale).

### 3. *TETRASTICHUS MITTAGONGENSIS* Girault.

A female, Tasmania (A. Simson), No. 3581.

Scape red-brown. Clypeus bilobate, as seems to be usual for the *Tetrastichini*. One of the apical spines of the long maxillary palpus is shortened and depressed, forming a sword-shaped seta; the short, labial palpus is also thus armed. The second tooth of the jaw is rather deeply concave, so that a third tooth is formed nearly. Lateral margin of the propodeum carinated. Lateral parapside and the pronotum finely sculptured. Second wing with fourteen lines of discal ciliation. Vertex and upper face with distinct punctures.

### Genus *TETRASTICHODES* Ashmead.

#### 1. *Tetrastichodes fuscitibiae*, n. sp.

Dark aeneous, legs and antennae concolorous except knees, tips of the tibiae, fore tibiae, tarsi and an obscure cinctus just before the middle of hind tibia. Postscutellum dull yellow except the meson widely. Propodeum with a (short) median carina. Joint 1 of the funicle twice longer than wide, somewhat exceeding the pedicel, 2 and 3 somewhat shorter; spicule distinct; second ring-joint very thin. Jaws tridentate. Palpi single, the labial much shorter than the other, both dark. Stigmal vein straight, rather long, the postmarginal a fourth or more its length. Mesal margin of the axilla narrowly lemon-yellow. With the usual sculpture. Flagellar hairs of moderate length, in several irregular rows per unit. Club nearly as long as the funicle. Setae from the marginal vein gross.

A female, Cradle Mountain, Tasmania (H. J. Carter and A. M. Lea).

### Genus *ASYNTOMOSPHYRUM* Girault.

#### 1. *Asyntomosphyrum limbus*, n. sp.

Black except lighter tarsi, the fore wing lightly clouded on basal  $\frac{2}{3}$ , especially opposite and beyond the marginal and stigmal veins, remarkable for their long fringe (which is a bit over a third their greatest width) and for their distinct, short postmarginal vein. Stigmal vein long and straight. Joints of the funicle a bit longer than wide, subequal to the pedicel but 3 shorter, globular; joints clothed with sparse, long hairs, a few on 3 very long. Spicule very long, the joints of the club exceeding funicle joint 3. Tooth 3 of the jaw shorter than 2.

Clypeus subentire at mesal apex (unusual). Cheeks with a few longish setae. Second wings acute, 4 lines of discal cilia, its caudal marginal cilia distinctly exceeding the widest part. No punctures except obscure ones along the lateral margin of the scutum. Postscutellum rather large. Propodeum with a paired median carina only. Abdomen more or less scaly. Pronotum and lateral parapside with sculpture uniform with the rest and nearly bare.

A female, Cradle Mountain, Tasmania (H. J. Carter and A. M. Lea).

### Genus *QUADRASTICHODELLA* Girault.

#### 1. *Quadrastichodella nova*, n. sp.

Aeneous, wings clear, coxae and femora concolorous, also flagellum, scape yellow. Scape strongly clavate, at apex above beset with strong teeth (seen from

side, from above coarse, serrated sculpture), as is also the pedicel, latter as long as the funicle and nearly as long as the club. Joints of the funicle somewhat wider than long. Ring-joints distinct. Propodeum short at the meson, there with a flat median carina. Spicule distinct, not very large. Jaws strongly tridentate. Clypeus bilobate. Labial palpus moderately long. Postmarginal vein half the moderately short stigmal. Abdomen equal to the thorax in length, conic-ovate. Metatarsus subequal to the stout tibial spur and to each of the next two joints, 4 longer by far. A line of setae down the lateral margin of the scutum. Second wing obtuse at apex.

A female, Adelaide, South Australia; 2 females (Macleay Museum) from South Australia. The types are in the Macleay Museum.

#### Genus GOETHELLA Girault.

As *Tetrastichus* but inner grooves of the scutellum, groove of scutum absent; lateral groove of the scutellum outside of the bristles, at margin. Ring-joints large, equal. Male antennae: Four funicle joints, three club joints; the scape with a conspicuous, mound-like ventral expansion whose obtuse apex is near the apex, the funicle joints each with a dense ring of very elongate hairs from near base. Third tooth of the mandible wide, obliquely truncate from near the base of the acute 2. Palpi single, maxillary rather long. Propodeum very short at meson, with a median carina, no lateral.

##### 1. GOETHELLA ASULCATA Girault.

Dark aeneous, wings clear; knees, tibiae, tarsi, scape pallid. Joints of the funicle quadrate, shorter than the pedicel, 1 a bit longer than wide. Spicule small. No punctures.

Joint 1 of the male funicle quadrate, others a bit longer, subequal to the pedicel and to the joints of the club; spicule stout, distinct; the very long hairs are also on joints 1-2 of the club but further from base. Legs in the male lemon-yellow, except hind coxa.

Two males, four females.

#### Subfamily ELASMINAE.

##### 1. *Elasmus bellicorpus*, n. sp.

Described in my table of species as follows: Yellow, abdomen orange marked with green; setae on hind tibia in (3-5) sagittate areas; mesopleurum not with a large black spot or not mostly black; head mostly yellow, abdomen not with a large, round black spot before tip; scutellum entirely yellow, the scutum with much green and black; like *E. arumburinga* but jaws 5-6-dentate, more yellow on scutum, the green-black from the pronotum forming a wide median line on scutum to slightly beyond the middle where scutum and parapsides are entirely and evenly green. Propodeum entirely green except the cephalo-lateral corner, and so the vertex except along the eye narrowly and upper  $\frac{2}{3}$  of the occiput; joints 1-2 of the funicle a third longer than wide, 3 somewhat longer. Green of the abdomen as follows: Lateral margin and meson at base, distal third, a blur (with reciprocal marginal blurs) in three places, apices of segments 3-5 (equally before apex and after base of abdomen, 3 is close to the distal black-green which commences, except lateral fourth (neck nearly to lateral margins).

The palpi are 1- and 2-jointed (maxillary).

A female, Grantville, Victoria (Queensland Museum).

2. *ELASMUS DUBIUS* Girault.

Two females on *Atriplex*, South Australia.

3. *ELASMUS NAKOMARA* Girault.

A female, Samsonvale, Queensland. Sweeping grass in forest, September 18, 1927 (A. A. Girault).

Genus *EURYISCHIA* Koebelc.1. *EURYISCHIA UNMACULATIPENNIS* Girault.

A male, two females, Magnetic Island, Queensland (A. M. Lea).

The male is similar to the female, but the legs, scape, pedicel and face are white. The scape bears a great convex, ventral, foliaceous expansion studded with seven stiff bristles along ventral margin; its fore wing is hyaline, the proximal edge of the discal cilia somewhat irregular. Maxillary palpi (male) apparently 4-labial, 2-jointed.

I had already described the male of this species from reared material in the Queensland Museum (H. Hacker).

2. *EURYISCHIA COMPEREI* (Ashmead).

A female, Owieandana, Northern Flinders Range (H. M. Hale and N. B. Tindale).

This was typical (with the middle tibia dark), but the infuscation of the fore wing was faint (often the case) and the postscutellum yellow. The species varies in wing infuscation and the colour of the antennae and middle tibia.

Genus *EURYISCHOMYIYA* Girault.1. *Euryischomyiia setosa*, n. sp.

Hind and middle coxae black, hind femora and others above and below narrowly, black. Black, head and upper thorax, except the propodeum, spaces off the scutellum, cephalic axilla, pronotum at meson, cephalic parapside, basal and apical margins of the scutellum, orange; scutellum with 3 setae along each lateral margin; about cephalic half of the scutum setose, this setose area bounded caudad by a cross-row of 6 bristles, 3 on each side of which the lateral two are gross; naked thence except for a bristle on the caudo-lateral corner. Two gross setae upon the backward spur of the submarginal vein, base and apex. Discal ciliation terminating at the base of the marginal vein, its basal margin sinuate.

A female, McIrose, South Australia, October (A. M. Lea).

Subfamily *EUCHARITINAE*.Genus *EUCCHAROMORPHA* Girault.1. *EUCCHAROMORPHA VIRIDIS* Girault.

Two females, Launceston, Tasmania (F. M. Littler), February 6 and January 26, 1916.

There was a median groove on the scutum in one specimen. The fringes of the fore wing arc present. The whole abdomen is densely, minutely pilose. The mouth-plate is at least 4-digitate and the jaws 2- and 3-dentate.

Genus *STILBULA* Spinola.1. *Stilbula quadri-digitata*, n. sp.

Aeneous, the wings clear, venation pale yellow, so the scape, pedicel, legs except coxae and femora (except apices) and the tegulae. Striate in the usual way, scutellum with a median groove, strongly bidentate at apex but not produced,

the teeth short. Petiole coriaceous,  $2\frac{1}{2}$  times longer than wide, with a lateral carina. Propodeum glabrous to the spiracular sulcus, with a thin median carina. Segment 2 the whole surface, glabrous but with a few pin-punctures ventro-laterad. Club and distal joints of the funicle yellowish.

Scape equal to joint 1 of the funicle, which, with the others is produced somewhat on one side of apex, twice longer than wide at apex; scape thrice longer than wide, equal club; joint 2 of the funicle a bit longer than wide at apex, 5-6 quadrate, 7 wider than long; antennae 12-jointed but the joints of the club are merely indicated by constrictions, no sutures. Dorsal thorax naked.

Discal ciliation dot-like, no fringe; stigmal vein perpendicular, not a quarter the length of the postmarginal vein. Costal cell with a more or less paired central line of cilia.

Mouth-plate 4-digitate, digits short, about twice longer than wide.

A female, Ardrossan, South Australia (J. G. O. Tepper).

### 2. *Stilbula albipennis*, n. sp.

From *S. quadri-digitata*: The mouth-plate though longer than wide is blunt at apex and bears six elongate, pale spines (therefore, it is not branched into four short fingers each bearing a spine at apex and it does not widen distad). The scape is dark aeneous, funicles 1-3 equal, thorax densely punctate, venation and discal ciliation indistinct; and so forth. The antennae taper distad, 12 distinct joints.

Aeneous-black, wings transparent and nearly naked; discal ciliation very sparse, pale; pedicel more or less, flagellum after funicle 3, knees, tibiae except 3, apex of tibia 3, tarsi yellowish.

Head except clypeus, circularly striate. Thorax entirely closely but not coarsely punctate, finely so in middle of mesopleurum, the metathorax foveate, the projection forming an erect, blunt, strong tooth on each side. Femoral furrow deep, so the lateral sulcus of propodeum, former glabrous. Petiole punctulate, foveate proximad,  $3\frac{1}{2}$  times longer than wide, lateral margin narrowly carinated. Meson propodeum widely concave, no median sulcus. Abdomen below finely pitted. Scape twice longer than wide, subequal funicle 1, scaly. Funicles globular, smaller than the pedicel.

A female, Grootc Eylandt, North Australia (N. B. Tindale).

### 3. *Stilbula albipetiole*, n. sp.

Purplish, fore wing lightly infuscated from about bend of the submarginal vein. Legs except coxae, petiole, tegulae, scape except beneath at base and pedicel, white, venation yellow-brown. Head circularly striate. Thorax foveate-punctate, this sculpture coarser and more or less longitudinally striate on metapleura; prongs of the scutellum moderately slender, exceeding the basal part. Abdomen above, from apex of 2 (about middle), and nearly all below, densely punctate (punctulate), the petiole stout, about twice longer than wide, finely, longitudinally grained, narrower at base. Propodeum with a median ruga, the lateral sulcus wide and deep, the "hump" forming a large, obtuse "tooth," erect. Postmarginal vein elongate, the stigmal perpendicular, thick, narrowing to apex; bend of the submarginal vein abrupt.

Discal ciliation distinct, not very dense, no fringes. Fore wing widest through the stigmal vein. Mouth-plate with 8 digits, the central pair shorter, each with an elongate, pale, stout spine, the whole much as in *S. octodigitata*. Scape (excluding bulla) twice longer than wide, a bit shorter than funicle 1, latter distinctly longest, equalling 2 plus 3, 12 hemispherical, next smallest after pedicel; joint 8 quadrate, rest decreasing distad.



From *S. octodigitata*: Petiole all white and much shorter, scape pale and longer, funicle 1 shorter; prongs of scutellum are not shorter than the basal part, the median groove of the scutellum is obscure, abdomen with distinct sculpture and so forth.

A female, Caramby, Victoria, on *Bursaria spinosa*, January 14, 1887 (J. G. O. Tepper).

Also a male in the Macleay Museum from South Australia. In this sex the petiole is nearly as long as the rest of the abdomen (about six times longer than wide) and with lateral margins carinated. The antennae are 12-jointed, each of the 9 funicles with a long ramus from the same side, of 1 and 9 these a bit shorter, joint 1 wider than long, equal the pedicel, 9 over twice longer than wide; scape over twice the length of the pedicel, thrice longer than wide, half the length of the club, the latter is long as ramus 9 and with a distinct tooth-like projection between middle and apex on the side opposite the rami.

The propodeum bears a narrow median sulcus instead of a ruga, the stigmal vein is pale and shorter, the discal ciliation fainter. The mouth-plate is 10-digitate but similar in size and shape to that of the female. Jaws 2- and 3-dentate. Otherwise the male is the same. Process of the scutellum about half the length of the scutellum. Basal part distinctly wider than long and shorter than the "teeth" in the female, the "teeth" in the male quadrate, equal.

#### 4. *Stilbula octo-digitata*, n. sp.

Purple, rugoso-punctate, the wings clear, veins pale, abruptly black from near the apex of the marginal vein; legs except the coxae yellow-brown; femora darker, scape nearly concolorous. Petiole white with an aeneous cinctus at middle, smooth, five times longer than wide, swollen at middle; scape a fourth longer than wide, not quite half the length of joint 1 of the funicle, exceeding the subglobular pedicel; funicle 1 thrice, 2 twice, 3 one and a half times longer than wide; 8-10 subglobular, 7 quadrate and larger than 8; club or 10 not well defined, rounded at apex. Scutellum with a distinct foveate median groove, the furrows joining around the apex; bifids shorter than the basal part of the projection. Scutum with a less distinct median groove, the furrows joining around the apex. Lateral sulcus of the propodeum wide, more coarsely foveate than the convex mesal part, this latter coarser than the punctuations of scutum and scutellum. Tegulae yellow.

Plate of mouth 8-digitate, the digits rather long, tubular, the middle shorter, at apex each with a long, pale bristle which appears to be truncate at apex (except on middle ones) as in some Thysanoptera. They are stout. Abdomen ovate, a bit compressed, not upturned, exceeding petiole.

A female, King George Sound. The type is in the Macleay Museum.

#### Genus *PSILOGASTER* Blanchard.

##### 1. *PSILOGASTER PULCHER* Girault.

A female, Tasmania, No. 2936 (A. Simson).

Belongs to *Epimetaea* Girault. This sex agrees with the description of the male except that the club is somewhat longer than funicle 7. The lower face bears scattered pin-punctures. The mouth-plate is 8-digitate, digits long with elongate apical spines, the lateral longest but not projecting farther. On one side there was a short ninth digit. The glabrous area on the caudal parapside is rather large. Pubescence on the scutum very sparse.

## Genus EPIMETAGEA Girault.

## 1. EPIMETAGEA MAGNIFICA Girault.

A female, Mount Lofty, South Australia (J. G. O. Tepper).

Funicle 1 a bit over half the length of the scape, a third longer than 2, nearly twice the length of the pedicel, a fourth shorter than the club, 7 exceeding the pedicel. Basal joint of the maxillary palpus very elongate, subequal to the 3-jointed labial palpus whose distal joint is longest. Mouth-plate 8-digitate, the digits long, exceeding the palmlike basal part. In the lateral aspect, segment 2 is a third (or more) of the surface, in the dorsal, all of the surface. Abdomen glistening.

2. *Epimetagea sanguiventris*, n. sp.

As the description of *E. bicoloriventris* but the entire abdomen (except the petiole) except basal  $\frac{1}{5}$  above crimson, legs except coxae and hind femora more or less laterad, venation, tegulae, scape, straw colour; rest of the antenna red-brown. The glabrous area on the mesopleurum is cephalad. The scape distinctly exceeds funicle 1 (almost twice longer); funicle 1 is subequal to the club, nearly twice longer than 2 or 3, all thicker at apex. Petiole over twice longer than wide. punctate, lateral margin carinate. Dorsal thorax pilose. The propodeum not rugose but rugulose and the mesal edge of the deep spiracular sulcus is carinate. Antennae 10-jointed, club solid. Scutellum terminating in a small, submarginate plate.

Mouth-plate 13-digitate, the digits elongate and with long, stout apical spines, which are usually shorter than the part bearing them and blunt at apex. At least one palpus 3-jointed, 1 and 3 elongate, 2 short. Discal ciliation minute, not very dense, fringes absent around distal margin, minute elsewhere and inset from margin.

A female, Mount Lofty, South Australia (J. G. O. Tepper).

3. *Epimetagea flavifemora*, n. sp.

Purple, legs except coxae, scape, pedicel yellow-brown, wings lightly embrowned, veins dark; abdomen black, dark red in a wide crescent from near meson of near apical end of 2 to and along upper distal half of the side of 2 at distal half (leaving apical margin of 2 black); and the short 3 (making a concave cross-stripe nearly as thick as the crescent, latter best seen from the dorso-lateral aspect). This second red is not at apex in the dorsal aspect.

As identified specimens of *E. rufiventris* Ashmead otherwise, but lower half of face glabrous with scattered pin-punctures, cheeks and upper head circularly striate; funicles 2 and 3 are longer in relation to 1, thrice longer than wide; area of the propodeum between the lateral sulci more finely rugulose and there is a weak, narrow median sulcus. There is also a median groove on the scutellum (not marked in either species).

Joint 1 of the funicle exceeds the scape, and 7 and 8 are nearly twice longer than wide (thus joints a bit longer than with the other species). Joints 7 and 8 are the distal two joints of the funicle.

A female, Camden, New South Wales; also Monaro. Types in Macleay Museum. The second specimen bore fuscous femora.

4. *Epimetagea aeneobrunnea*, n. sp.

Brown, the head and upper thorax (except propodeum) aeneous-brown, the flagellum except pedicel, dark; wings subhyaline. Head circularly striate, the striae not dense; scutum cross-striate at cephalic half, the striae curving concentrically caudo-laterad to the furrows, from centre longitudinally striate.

Parapside glabrous, lateral half and distal margin punctate rather coarsely. Axilla, scutellum rather coarsely long-striate, scutellum with distinct median groove.

Propodeum glabrous but a bit crinkled on the mesal part, with distinct median and lateral carinae, the lateral strongly curved off laterad as it goes toward cephalic margin and between its cephalic end and the margin, the spiracle is lost in a network of rugae, no groove. The lateral carina originates dorso-laterad, runs nearly straight caudad (and a bit mesad), then makes wide bend nearly straight mesad, thence by a long gradual bow-bend reaches apex; the first two curves are about equal, 3 longer.

Segment 2 of the abdomen is about half the surface, 3 short, darker, forming a dark bow across the abdomen its ends curving up into segment 2. Petiole thrice longer than wide, glabrous but with a stout carina down each side (lateral aspect).

Jaws 2- and 3-dentate. Mouth-plate 8-digitate, digits short and blunt, each bearing an elongate, stout spine; there is also a similar spine laterad of digit 2 of either side (as if from a third digit).

Scape over twice longer than wide, over half joint 1 of the funicle, latter nearly twice the length of 2, widening distad; 2-3 equal, longer than wide, rest short but the oval club nearly as long as 2.

Discal ciliation dense, dot-like to about the base of the marginal vein. Scutellum obtusely pointed, sans distinct plate or tooth.

A female, King George Sound. The type is in the Macleay Museum, Sydney.

#### Genus CHALCUROIDELLA Girault.

##### 1. *Chalcuroidella bispinosa*, n. sp.

As the revised description of *C. orientalis* but scape distinctly exceeding joint 1 of the funicle, general colour aeneous, mouth-plate 11-digitate (digits long, outer pair more divergent); stigmal vein yellow; legs except coxae, tegulae, scape yellow brown; rest of the antenna and femur 3 dark brown or fuscous. Abdomen red except basal  $\frac{1}{4}$  above and a spot above just before apex. There is a small glabrous area near the centre of the parapside. Petiole wider at base, where it bears a long lateral spine on each side. Abdomen smooth but with many scattered pin-punctures. Face very pilose. A deep, wide fovea at the base of the scutellum between the axillae. Legs pilose.

A male, Mount Lofty, South Australia (J. G. O. Tepper).

The scutellum appears to be folded up at apex and the rolled-up part pressed into the other; from lateral aspect, there is a short tooth just caudad of the emarginate apical plate.

#### Genus METAGEA Kirby.

##### 1. *Metagea punctulativentris*, n. sp.

Reminds of *Tricoryna subsalebrosa*, but hind metatarsus is not thick and the scape is over half of funicle 1, latter equal to 2 plus 3, these  $\frac{1}{3}$  longer than wide; the club, joint 10, constricted at middle, a bit longer than 9, 8 and 9 subquadrate.

As description of *M. kirbyi* Ashmead but abdomen densely pin-punctulate (except the long segment 2 above), its petiole only  $2\frac{1}{4}$  times longer than wide and very finely long-lineolated. Legs except articulations and the tarsi dark, general colour dark blue. A median groove on the scutellum and between the large axillae. Rugosity of the thorax not coarse, only medium, the smooth part of the parapside is the mesal half of middle part. Venation beyond the submarginal vein, pale. Pedicel wider than long. Propodeum with a median carina, transverse striae from it.

Jaws 2- and 3-dentate. The hemispherical mouth-plate bears a middle spineless digit and 4 or 5 on each side of it, all wide and obtuse, each bearing a long, colourless spine. Lateral ocellus twice closer to the median than to the eye, latter sparsely hairy. Discal ciliation distinct, very fine and rather dense, to about the base of the marginal vein (a bit beyond).

Three females, South Australia. Types in Macleay Museum.

#### Subfamily EURYTOMINAE.

##### Genus EURYTOMA Illiger.

#### 1. *Eurytoma murrayi*, n. sp.

The same as *E. brevipetiolata* but abdomen yellow on venter and lower half of the sides, femora 1-2 above, 3 (all) black (except ends), so hind tibiae above centrally; scape black on dorsal edge. Stigmal and postmarginal veins subequal, half the length of the marginal. Median channel unifoveate. The yellow triangles on the face of the male nearly coalesce except at meson just beneath antenna. Resembles *E. tasmanica* in everything except channel of propodeum, punctate parapside, its longer marginal vein and the colour of the legs. Funicles exceeding pedicel. Petiole in female a bit longer than wide.

Two pairs, Tasmania.

The distal part of the disc of the scutellum bears sparse punctures, the interspaces finely reticulated. The outer orbits in the male are yellow.

#### 2. *Eurytoma cecili*, n. sp.

Characterised by the pointed, conic-ovate abdomen with 2 exceeding any other segment, then 6 and 7 which are equal, finely reticulate and each with several rows of thimble-punctures; segments 4 and 8 shortest, 3 equal 5 and less than half of 2 and a fourth shorter than 6. Base of scape, knees, tibiae, tarsi, apex of the ovipositor valves, apex of the pedicel, red-brown. Funicles 1-2 somewhat longer than wide, somewhat exceeding the pedicel. Venation black, the postmarginal vein somewhat exceeding the stigmal, three-quarters the marginal. Petiole quadrate, surface coriaceous, with ridged lateral margins. Segment 5 finely reticulate. Median channel very distinct, coarse, bifoveate. Femoral furrow cross-rugulose-punctate. Densely punctate, pubescent. Lower propleurum reticulate. Wing 2 broad. Body robust, long. Punctures on lower half of the cheek sparse, the area reticulate. Runs with *E. secunda* and allies.

A female, Vivonne Bay, Kangaroo Island (Museum Expedition), February, 1926.

#### 3. EURYTOMA ARETHEAS Walker.

A female, Tasmania.

This species, in my revised table, runs in near *E. spes* and allies but differs in bearing no median basin on the propodeum. It also runs to *E. nigroculex* but aside from its normal abdomen, funicle 1 is shorter, as is also the petiole.

#### 4. *Eurytoma nigroculex*, n. sp.

As *E. helena* but abdomen with a distinct petiole which is twice longer than wide, no propleural spot, funicle 1 is somewhat over twice longer than wide, twice the length of the black pedicel, lateral ocelli equidistant, venation brown, marginal vein twice the stigmal, latter a bit shorter than the postmarginal. Punctuation dense and uniform, the median channel bifoveate at basal  $\frac{1}{2}$  only. Femoral furrow cross-striate and punctulate. Segment 6 of the abdomen is half the length of 5, latter a bit shorter than 2-4 united. Segment 6 is naked and subglabrous. Tegulae red, fore tibia red-yellow only at apex and along each side.

Somewhat as *E. aretheas* Walker (as identified) but segment 6 is short, very hairy and only about a fifth the length of 5.

A female, Carribee, Yorke Peninsula, South Australia (N. B. Tindale).

#### 5. *EURYTOMA TASMANICA* Cameron.

Equals *Xanthosoma*. Two hind tibial spurs. A pair, Launceston, Tasmania, No. 2006. Labelled as this species in typewriting, and probably a part of the original material of Cameron's; the type locality is the same. The female agrees with the description, but there is a propleural spot in both sexes. The umbilicate punctures on dorsal thorax are noticeably sparser only on the scutellum at distal half and on nearly entire parapside which is finely reticulated; the scutum is finely cross-lined only on cephalic margin. Femoral furrow reticulate scaly. The middle femora beneath and tibiae 2 and 3, except base and distal  $\frac{1}{3}$ , are slightly blackish also. The abdomen is brownish along lower sides and ventum and also distad of 5, ovate, rounded above, 5 long, glabrous, over the length of 2-4 united, petiole quadrate. Propodeum with a shallow, bifoveate median channel. Marginal vein short, a bit exceeding the postmarginal, the still shorter stigmal not exceeding the length of its knob.

The male has the middle face up to the antennae, outer orbits flavous; hairs of flagellum exceed the distal joints only. In the female, segment 3 is longer than the linear 4, both united less than 2. Propodeum umbilicately punctate.

The species was lost. It resembles and is similar to the species of *Eurysystole*.

#### 6. *Eurytoma striatifemur*, n. sp.

As *E. silvipuer* but the fore coxa on cephalic aspect, base of middle coxa also black, the abdomen above entirely black, except dorso-laterad centre of 5 and 6; femora 1 and 3 above except at each end, fore tibia centrally above, hind tibiae laterad except each end, black. Prothorax entirely red-yellow except face nearly to the margins, median line widely and a round spot between it and the lateral margins; head yellow except frons, scrobes, vertex and upper half of occiput continuously except margins of the eyes. Scape black above.

Postmarginal vein subequal to the stigmal, latter shorter than its rather large knob, latter dark. The fine rugulae in the median "basin" are from the lateral boundaries, while the flat meson is finely punctulate and has a median carina from middle to apex, no foveae at base but the latter is carinate.

A female, Melrose, South Australia, October (A. M. Lea).

#### 7. *Eurytoma varivena*, n. sp.

As *E. striatifacies* but somewhat larger, venation lemon-yellow with the rather short marginal vein (thrice longer than wide) equal to the stigmal and somewhat shorter than the postmarginal. Median channel of the propodeum light (shallow), bifoveate and narrowing. Segment 5 somewhat exceeds 4 but not as long as 2-4 united. Abdomen compressed, its petiole quadrate, abdomen high toward base, not much longer than high there. Characterised by the venation.

The fore tibiae are yellow beneath, the funicles moniliform but exceeding the pedicel. Femoral furrow finely punctulate.

A female, Mount Lofty, South Australia (J. G. O. Tepper).

Compare also the species *E. aroueti* (Girault) which differs in having the three distal veins of the fore wing equal and no channel on the propodeum through the median basin; moreover, in this species (*varivena*), the basin is ovate and concave. Ovipositor valves entirely black.

## 8. EURYTOMA CASUARINAE Girault.

A female, Magnetic Island, Queensland (A. M. Lea).  
The whole dorsum of segments 2-3 of the abdomen were black.

## 9. EURYTOMA AUSTRALIA Girault.

Three males, six females, mounted together and labelled "Tasmania." In the male the hind tibia is all black except each end, and the hairs of the flagellum were distinctly longer than the diameter of the joints, shorter in typical forms. In the female, segment 5 of the abdomen equals 2-4 united and is over twice the length of 4.

I am loth to give the above male variation a name but the difference is marked enough. It may be a common variation.

10. *Eurytoma minutivespa*, n. sp.

As *E. leeuwenhoekii* but flagellum black, fore femur so only at basal half above, 2 beneath only, 3 lateral aspect only; venation yellow-brown. (See No. 11).

In my revised table, follows *E. mazzinii*.

A female, Owieandana, Northern Flinders Range (H. M. Hale and N. B. Tindale).

11. *Eurytoma leeuwenhoekii*, n. sp.

As *E. semifuscicornis* but a half smaller, abdomen more humped, 3 is shorter than 4, the subquadrate-ovate median basin shows no trace of a median channel except at base and is uniformly punctulate, there is no petiole, segment 5 is over twice the length of 4 and longer than 2-4 united, the antennae arc entirely white (except the rounded pedicel above slightly), the funicles, though exceeding the pedicel, are subquadrate and equal. Venation very pale but of the relative lengths, the postmarginal vein nearly as long as the marginal. Femoral furrow densely punctate.

A female, Roper River, North Australia (N. B. Tindale).

## 12. EURYTOMA PYRRHOCERUS Crawford.

Two females from a brown, oval cocoon of what appeared to be some Ichneumonoid Hymenopteron. The cocoon was about a quarter inch in diameter. This species differs from *E. semifuscicornis* mostly in bearing no basin upon the meson of the propodeum, instead a distinct median channel. This channel is cross-rugose. There are no other differences.

In these specimens segment 5 of the abdomen distinctly exceeded 4 (Crawford says 3 and 4, meaning 4 and 5, are nearly equal). There is, of course, variation here, due to the movement of the segments one within the other.

## 13. EURYTOMA SEMIFUSCICORNIS Girault.

Six females reared from the bag of an *Entometa* moth, Adelaide, South Australia, February 8, 1897.

One of the specimens was only as long as the thorax of the others. The flagella were rather darker than usual.

## 14. EURYTOMA FILISILVAE Girault.

Several pairs, Mount Pleasant, South Australia (Loveday); from galls and lerp, February 9, 1897.

The apparent male is black, antennae red distad, otherwise similar to the female; one specimen, however, had the antennae, legs and thoracic pleurum

except metathorax, red-yellow. There is usually considerable colour variation in the males of this genus.

15. *EURYTOMA* species.

Many males entirely red-yellow except the head (except mouth), pronotum at caudal meson, abdomen (often, except petiole), scutum, axillae, scutellum and often propodeum (and usually its median channel). Reared from galls, lerp and so forth, Mount Pleasant, South Australia (Loveday), February 9, 1897.

16. *EURYTOMA TERRAE* Girault.

Two females, Adelaide, South Australia.

The fore femora were blackish laterad except at apex.

Subfamily CALLIMOMINAE.

Genus *MEGASTIGMUS* Dalman.

1. *Megastigmus hilaris*, n. sp.

As *M. brachyscelidis* but hind coxa black only laterad and a middle lateral spot on the hind femur. Ovipositor a bit exceeding the body. The following yellow: Head except vertex (except orbits) and upper half of the occiput; prothorax except face and median line above widely (at middle of this, from each side, a short lateral projection); caudal half and lateral parapsides, prepectus; apex, scutellum and the transverse postscutellum.

Abdomen fulvous with five cross-bands of black from apex of basal  $\frac{1}{3}$ . Scutellum reticulate, on scutum very fine cross-striation, setae equidistant. Propodeum non-carinate. Fore femur with a black streak along lateral disc. Antennae black, joint 1 of the funicle nearly twice longer than wide, 7 quadrate, equal pedicel in length.

A female, Lucindale, South Australia (B. A. Feuerheerdt).

2. *Megastigmus cecili*, n. sp.

The same as *M. longicauda* but seta 2 of the scutellum a bit closer to 1, abdomen flavous, orange above, with only three cross-stripes (none distad of middle), 1 really the converging lateral margins of the long segment 2 (at its distal half), 2 across base of segment 3, 3 mostly a marginal spot at base of segment 4.

Head, prothorax flavous; propodeum black only widely down the meson and the sutures (in type female only cephalic margin). Stigma ovate. No black on head except upon the occiput, circularly around the neck. Segment 4 also with a longitudinal marginal spot at apex. Distal funicle joint a bit longer than wide.

Two females, Murray Bridge, South Australia (A. M. Lea).

3. *Megastigmus pallidiocellus*, n. sp.

Ovipositor subequal abdomen, latter subpetiolate. Flavous, eyes green, ocelli colourless. Face with strong converging striae below; two transverse, narrow marks just cephalad of the propodeum; a mark caudo-mesad of the tegulae, black; a transverse mark each side meson before apex segment 2 of the abdomen, 3 above except apex and a shorter stripe across base of segment 5, dusky. Funicle 1 a half longer than wide, shorter than the pedicel. Vertex with black setae. Ocelli in a triangle, lateral equidistant between eye and median. Second setae of the scutellum twice closer to 3 than to 1. Sculpture very fine.

A female, Banyo, Queensland, sweeping mangrove, September 30, 1923. Type in Queensland Museum. A female, Ooldea, South Australia (A. M. Lea).

In this last specimen the eyes were reddish, the second seta of the scutellum

was somewhat (not twice) closer to 3 than to 1. Stigma small, elliptical. Another female, Adelaide, South Australia (R. Burton) was similar but the general colouration was orange, cheeks, legs and scape lemon, the second seta of the scutellum twice closer to 3, stigma wider. It is apparently true that the position of the setae on the scutellum varies somewhat, as also does the shape of the stigma.

4. *MEGASTIGMUS SULCICOLLIS* Cameron, **walsinghami**, n. var.

A pair, Mount Lofty, South Australia (A. M. Lea).

Ovipositor not quite as long as the body. The same as *M. sulcicollis* but no black upon the scutum or scutellum and the ovipositor is shorter. The male stigma is large and round and its flagellum beset with long, scraggly hairs, the funicle long, narrowing distad. In the female, the three setae of the scutellum are equally spaced, the abdomen more or less sordid, especially across middle. The male abdomen is black above, the propodeum black, the first funicle joint over twice longer than wide, pedicel small.

The variety is similar to *M. maculatipennis* but the setae of the scutellum are equidistant and the male antenna differs. The male of typical *M. sulcicollis* is not known.

5. *MEGASTIGMUS SPENSERI* Girault.

Many pairs from galls on the leaves of *Eucalyptus obliqua*, Blakiston, South Australia, April, 1888 (T. D. Smeaton). Hatched in the following May. Also three females, same label, April 23, 1888.

The yellow stripes on the abdomen in the male were usually absent.

6. *MEGASTIGMUS MACULATIPENNIS* (Girault).

Many pairs from Port Jackson figs (A. J. Coates), Sydney, New South Wales.

The females of these specimens usually had the spiracular sulcus black; the pronotum was orange except at or near the caudal margin. The male is similar but its abdomen bears six distinct black cross-bands, 5-6 close together near apex. Also in the male the propodeum is sometimes immaculate or even all black between the spiracles. Neck of the pronotum black. The stigma in the female of these specimens was ovate, not globular, but I do not think this a stable character in the genus, as already stated.

The peculiar colouration of the species of this genus and the lack of structural differences make them difficult to define, but the setae on the scutellum, colour and position of ocelli, length of the ovipositor and the colour of the setae are some characters that can be used, though all of them vary somewhat. The grooves on the scutellum, first used by myself, unfortunately have been found to form one of those characters which is indeterminate—one can never be sure. Therefore *Epimegastigmus* and *Megastigmus* must be worked together. There is, moreover, a genus or group hidden in *Megastigmus* based upon male characters; and as very few of the males are known, as yet, the fact adds to the perplexity.

Genus *EPIMEGASTIGMUS* Girault.

1. *EPIMEGASTIGMUS FULVIPES* Girault.

Four females, Melrose, South Australia, October (A. M. Lea); one female, Adelaide (N. B. Tindale).

The stripes on the abdomen are near the apex of segment 2 (broken at meson) and most of 3 and 4 (hence well within basal half of the whole, 3 being about the middle). In one female, the setae on one side of the scutellum were equally spaced. The flavous colour varies: Sometimes the scutellum is nearly all flavous,



also the pronotum. The bands on the abdomen were very distinct in these specimens and vary from 2 to 3. On account of the flavous borders of the scutellum and parapsides, the above specimens were highly coloured and beautiful.

The species *E. limoni* Girault was at first thought to be but a duller form of this species (sometimes I cannot see the tibial grooves on the scutellum, a shadowy character). The only real difference between the two (females) is that in *E. fulvipes* there are 4-6 closely-set setae in the oblique line of discal cilia from the submarginal vein, while in *limoni* there are only 2, these well spaced; but in the males this character does not vary.

## 2. EPIMEGASTIGMUS TRISULCATUS Girault.

Three females, Tasmania.

The ovipositor was longer than usual by one-fourth. The median carina of the propodeum absent in all of these specimens except one where it was evident at basal and apical fourths, the interval filled by a diamond-shaped ruga. In all, there was a more or less distinct cross-carina on this region, but the rugulae vary here. The abdomen was black except at each end, but this colouration appeared to be due to oil in the body.

In a fourth female, from the same locality, although the abdomen was as just described, yet the two cross-stripes were faintly discernable and the blackening is not natural in life. The stigma is round-ovate.

Still a fifth female, Launceston, Tasmania, October 8, 1916 (F. M. Littler), was similar to the fourth, except that the ovipositor was a fourth shorter and the lateral margin of the propodeum and the mesopleurum behind the femoral furrow were orange. There was also a black spot in front of the lateral ocellus. There is considerable minor variation in colour and the sculpture of the propodeum varies.

## 3. Epimegastigmus banksiae, n. sp.

The same as *E. bucklei* but scutellum trisulcate, sculpture fine, margins of upper occiput delicate; head, prothorax, apex of the abdomen and legs also lemon; occipital black and that of upper scape narrow, no black otherwise on head; no other black except cephalic margin of the propodeum, as also the lines of its sulci, a line at the base of the tegulae and two faint cross-stripes beyond middle of the abdomen. (Flagellum missing.) No real sulci on propodeum.

A female, the Grange, South Australia, from galls on *Banksia* (A. Zietz), 1899.

## Genus NEOMEGASTIGMUS Girault.

### 1. Neomegastigmus leai, n. sp.

As *N. auritibiae* but scape yellow narrowly ventrad only, head up to the antennae and the cheeks golden; coxae concolorous except the apex of I, rest of the legs golden except middle laterad of the fore femur, femora 2 and 3, apices of the femora golden. Scape obclavate. A row of thimble-punctures along the lateral margin of the scutum and on each side of the meson of the scutellum far laterad. Scutellum cross-lined like the scutum. The same otherwise. Named for Mr. Arthur M. Lea.

A female, Kangaroo Island (A. M. Lea).

## Genus PODAGRION Spinola.

### 1. Podagrion metatarsum, n. sp.

Scape at base, legs except lateral fore femur, most of middle femur except beneath and hind femur, venter of abdomen more or less, fulvous. Median carina of the propodeum forking beyond middle, the forks nearly at right angles.

Antennae black. Joint 1 of the funicle somewhat longer than wide, distal one quadrate, as long as the pedicel. Club not enlarged. Femoral teeth large, columnar, 2-3 longest, 4-6 usually coalesced, short and terminal, six teeth.

Male similar with pale and simple metatarsi (metatarsus not by far half the length of the tarsus and not or but scarcely flabellate). Hind tibia not clavate.

Two males, one female, Melbourne, Victoria, February 22, 1909. From the eggs of the mantid *Orthodera*. Also many specimens of both sexes with the same data and bearing the No. 39.

## 2. *Podagrion flabellatum*, n. sp.

Aeneous; legs and antennae flavo-fulvous except middle of the lateral aspect of hind coxa, venter of abdomen brown. Hind femur slightly marked aeneous. Joint 1 of the funicle quadrate, shorter than the pedicel, distal three joints much wider than long. Carina of propodeum forking out from base. The male has joints 1-2 of hind tarsus flabellate, equal, together half the tarsus; they are also red-yellow. The male hind tibia is clavate and its body red-yellow, as follows: Antennae, legs except a long spot on hind coxa near middle base of lateral aspect, tegulae and abdomen except distal  $\frac{1}{4}$ . Four femoral teeth (male), the distal 2 smaller and coalesced.

A male, two females reared from what appeared to be galls, Launceston, Tasmania (F. M. Littler). A gall-like vegetable object was mounted with each specimen.

In this genus, the metatarsus in the male varies considerably.

### Genus PACHYTOMOIDES Girault.

#### 1. *Pachytomoides bicinctus*, n. sp.

As *P. frater* but distal half of segment 2 of the abdomen, red, a second black band at apex, joint 1 of the funicle a bit longer than wide, 2 and 3 quadrate, 8 twice wider than long; hind coxa, hind femur on lateral aspect, aeneous; propodeum with a median carina that forks at middle, punctate distad of the fork, rugulose proximad of it. Discal cilia of the first wing extending far toward base. Femoral teeth 10, 1, 3, 6, 8, largest, 5 minute, 10 wide.

A female, Launceston, Tasmania, April 1, 1916 (F. M. Littler).

The fore tibia is much prolonged from one angle of apex.

### Genus MACRODONTOMERUS Girault.

#### 1. *Macrodontomerus triangularis* Girault.

A female. Gawler, South Australia (A. M. Lea).

#### 2. *Macrodontomerus alighierini* Girault.

Two females, Tasmania.

### Genus AMONODONTOMERUS Girault.

#### 1. *Amonodontomerus montanus*, n. sp.

The same as *A. arboreus* but the pronotum with four rows of punctures, on scutum punctures sparse but over the entire surface (disc) and there are punctures on the mesal margin of the parapsides; segment 4 (abdomen) subequal to 2; legs except coxae, red; median carina of the propodeum obscure; ovipositor  $\frac{2}{3}$  the abdomen. A line of setae down the facial eye margin, curving over to the apex of the clypeus. (Both flagella missing.)

A female, Mount Lofty, South Australia (J. G. O. Tepper).

## Genus DITROPINOTELLA Girault.

## 1. DITROPINOTELLA COMPRESSIVENTRIS Girault.

Males, females, Tintinara, South Australia, from galls upon *Eucalyptus* (J. G. O. Tepper), January 6, 1887, and March 2, 1887. Also from galls upon *Eucalyptus obliqua*, foliage. Blakiston, April 23, 1888 (T. D. Smeaton). Emerged in May, 1888. Females.

Amongst the first lot were males. This sex bears purple legs except tarsi, scape entirely metallic.

## Subfamily TRICHOGRAMMATINAE.

## Genus LATHROMERELLA Girault.

## 1. LATHROMERELLA CHINDERAENSIS Girault.

A female, labelled "Cherry Gardens, South Australia (H. W. Andrew). Seeds of *Calamagrostis acmula*" and mounted with several male tetrastichines.

## Subfamily MYMARINAE.

**Australomymar**, n. gen.

The same as *Polynemoidea* but the club is solid.

1. **Australomymar aurigerum**, n. sp.

Black, the three large sclerites between scutum and propodeum, proventer, neck of and the space between median carinae of propodeum, petiole gold-brown; legs suffused with same colour; wings light smoky with a not wide band across at bend of the submarginal vein; scape long and slender, nearly as long as the fore femur, about eight times longer than wide (excluding the long bulla), twice the length of joint 1 of the funicle which is nearly twice the length of the pedicel, latter equal to joint 4; joint 2 elongate, longest, over  $\frac{2}{3}$  the length of the (body of the) scape and over six times longer than wide; 3  $\frac{1}{3}$  shorter than 2 and somewhat longer than 1, 4 and 5 each distinctly shorter than 1, 6 shortest. Fringes a fourth widest, 20-21 lines discal cilia extending to base of marginal (except a line or two). Ovipositor as long as the body. Scutum, parapsides coarsely scaly. Scutellum subquadrate, coriaceous; a rugulose, hemispherical sclerite follows it; postscutellum narrower, tricarinate, wider than long; propodeum long, with a pair of well-separated median carinae diverging to about middle, then converging. Hind tibiae densely beset with clongate hairs above. Metatarsus clongate but not half the length of the tarsus.

A female, Warragul, Victoria, 30, vi., 1929. In lichens and moss (F. E. Wilson). Type in collection of F. Erasmus Wilson.

## Subfamily CHALCIDINAE.

## Genus CHALCIS Fabricius.

## 1. CHALCIS RUBRIPES Girault VERGILII Girault.

A male, two females, Launceston, Tasmania, February 12, 15, and January 11, 1914, respectively (F. M. Littler, No. 2255).

## 2. CHALCIS RUFIFEMUR Girault, var.

A male, Mount Lofty, South Australia (R. J. Burton).

The disc of hind coxa above was red, while the fore tibia was dilute red with yellow ends.

3. *CHALCIS RUFICORNIS* Girault.

Same record as in pt. i.

The distal yellow on the hind tibia was very obscure.

4. *CHALCIS VICTORIA* Girault.

A female, Norwood, South Australia, reared from wattle galls, April, 1892 (J. G. O. Tepper); a female, Pegenozena, Tasmania, December 3<sup>1</sup> 1915 (F. M. Littler).

The amount of black on the tegulae and legs varies somewhat.

5. *Chalcis decens*, n. sp.

About the size of *C. shakespearei* and runs to that species and also (ignoring antennal insertion to *C. dipterophaga*). Fore wings missing.

Black, the following parts dilute red: Hind legs except for two yellow ellipses above on tibia at base and apex (the basal one longer than the red proximad of it and distinctly shorter than the red central red), abdomen beneath and lower sides of 2; fore and middle tibia except each end and on middle ones except ventro-laterad on one side (fore and middle femora diluted with red, apex rather widely in fore femur). Tegulae yellow. Antennae a bit above the ends of the eyes not distinctly above as in *dipterophaga*, which has conspicuous yellow apex of the hind femur, while the hind tibia is black where the red is in this species. There is a golden dot on lateral hind femur at ventral apex.

A female, Ardrossan, South Australia (J. G. O. Tepper).

6. *CHALCIS PLUTELLOPHAGA* Girault, *nortia*, n. var.

The same as *C. australiensis* but fore tibia yellow except above, except at each end. Hind tibia with no black at base.

A male, Launceston, Tasmania (F. M. Littler), January 2, 1917.

7. *CHALCIS RUBRIPES* Girault.

A male, Mount Lofty, South Australia (N. B. Tindale); and a female, same place (J. G. O. Tepper); two females, Lucindale (B. A. Feuerheerdt and A. M. Lea, separately); a male, Launceston, Tasmania (No 2255 of F. M. Littler).

In the Lucindale specimens nearly all of the fore femur and distal half of the middle femur were red. In the Tasmanian male, the fore femur except distal fourth and the middle femur except apex, were black. The black of the first two pairs of femora varies considerably in amount.

8. *Chalcis redia*, n. sp.

As *C. veronesini* but fore tibia with no black (red, above at each end, golden), the middle tibia is black on one side (the same side with yellow on each end); the abdomen as in *Stomatoceras* (that is, less convex and shortly stylate at apex); basal yellow of hind tibia a mere dot and, of course, smaller than the distal yellow. Femora 1-2 widely red at apex.

A female, by sweeping. Adelaide, South Australia (N. B. Tindale).

The lateral ocelli are somewhat closer to the eye than to the median ocellus.

There are several species of this genus that have the abdomen as in the above species (e.g., *C. pomonae* Cameron), but I am not sure as to the stability of this character. However, I have never seen variations of it.

## Genus CHALCITELLOIDES Girault.

## 1. CHALCITELLOIDES IO Girault.

A female, Blackall Range, Queensland (A. M. Lea).

This species is the same as *Chalcitella australiensis* Girault described originally as bearing no tooth above on the hind tibia. It seems the tooth was ignored or overlooked and later searched for and found. Hence the error. The name *australiensis* takes precedence. Middle coxa red.

## Genus XENARRETOCERA Girault.

## 1. XENARRETOCERA v-CARINATA Girault.

A female, in flood debris, Adelaide, South Australia (A. M. Lea).

In this specimen the wings were clear, apex of segment 3 of the abdomen somewhat concave. The second and third longitudinal rugae of the propodeum converged and joined at about middle, thence united; they, therefore, formed a sort of Y. Punctures of the scutum smaller and denser than those of the scutellum, latter well spaced.

2. *Xenarretocera murrayi*, n. sp.

Exactly similar to *X. v-carinata* except for the nearly equal punctuation of the scutum and scutellum, there being no wide mesal spaces upon the scutellum; moreover, the interspaces are not glabrous but finely reticulated.

A female, Owieandana, Northern Flinders Range, South Australia (H. M. Hale and N. B. Tindale).

## Genus STOMATOCERAS Kirby.

1. *Stomatoceras parvivespa*, n. sp.

Runs to *S. longicornis* but antennae black, joint 1 of the funicle slightly reddish and not quite as long as the pedicel, segments 2-5 red and all of venter; thus differs primarily in having more red upon the abdomen. There is a cross-stripe from the marginal vein, the usual loop from this and an infuscation from this loop to wing apex (except caudad). From *S. salti* (type, compared): More of the abdomen red, the wing infuscation, funicle 1 is distinctly longer. The species *salti* differs from *S. dipterophaga* in the formation of the femoral teeth—at first a straight line (not quite a half from base), then a long, gentle convexity, the whole occupying a half or more of the ventral margin.

A female, Beverley, Western Australia.

2. *Stomatoceras disconiger*, n. sp.

Runs close to *S. minor*, *omphale*, and *maeterlincki*. From *minor*: The legs except (as usual for the genus) fore coxa and the whole of the lateral disc of the hind femur and the fore femur obscurely dorso-laterad, red; funicle 2 black at distal half; wing not lightly dusky to apex from the strong loop; postmarginal vein a bit shorter than the marginal; abdomen entirely black. From *omphale*: By the large, discal black on the hind femur, by having the second joint of the funicle red at base, abdomen all black; teeth of the hind femur on distal  $\frac{2}{3}$ , the proximal convexity small, the other long and gradual. From *maeterlincki*: Hind coxa red, hind femur with the discal black; teeth of the scutellum strong.

Segment 2 is practically glabrous, half the surface, a short carina on each side of meson at base (also present in *S. parvivespa* and, doubtless, all of the species).

A female, Dorrigo, New South Wales.

### 3. *Stomatoceras vespella*, n. sp.

As *S. melitaræ* but differing primarily in the femoral tecth, which are on a bit more than distal half, proximad a long, gentle convexity occupying about  $\frac{1}{2}$  plus, at first straight but after middle forming a slight mound; then, nearly as long, a prominent, much higher convexity whose sloping (distal) side is much longer than the mound part, which is at the basal end. Also, legs except fore coxa, red, segment 4 (of abdomen) black above; pedicel, joints 1-3 of the funicle red (pedicel short as in *S. dipterophaga*).

A female, Adelaide, South Australia.

### 4. *STOMATOCERAS SALTII* Girault.

Distal half of segment 2 and all of 3 above are red. This variety is now considered a species.

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